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# Drug use by male and female high school students as related to sex-role, locus of control, and perceptions of their parents.

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DRUG USE BY MALE AND FEMALE HIGH SCHOOL STUDENTS  
AS RELATED TO SEX-ROLE, LOCUS OF CONTROL,  
AND PERCEPTIONS OF THEIR PARENTS

A Dissertation Presented

By

RAYMOND LESLIE HOOBLER

Submitted to the Graduate School of the  
University of Massachusetts in partial fulfillment  
of the requirements for the degree of

DOCTOR OF PHILOSOPHY

September 1976

Department of Psychology

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# ABSTRACT

Drug Use by Male and Female High School Students  
as Related to Sex-Role, Locus of Control,  
and Perceptions of Their Parents

(September 1976)

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A developmental theory concerning the etiology of adolescent drug misuse was presented. It suggested that inadequate sex-role modeling by parents of certain individuals leads to sexual identity problems that are most apparent during the adolescent period. These individuals are especially prone to engage in drug misuse, which is one aspect of adolescent disturbance. Concomitants of this disturbance would be a rejection of parents and a closer affiliation with peers, and a belief that external forces are powerful influences on behavior. One hundred seventy-eight 11th- and 12th-graders (109 female and 69 male) from two suburban high schools voluntarily completed a questionnaire package that included the Personal Attributes Questionnaire, the Parental Attributes Questionnaire, the Comfortable Interpersonal Distance Scale, the Nowicki-Strickland Internal-External Control Scale for Adults, a drug use questionnaire, and a demographic questionnaire. The subjects were divided into groups on the

basis of the type and frequency of their reported drug use (non-users, experimental alcohol users, experimental illicit users, regular cannabis users, and regular polydrug users). It was hypothesized that regular polydrug users (both males and females) in comparison with the other subjects would perceive their parents and themselves as possessing masculine-valued and feminine-valued characteristics to a lesser degree, would identify less with their parents and perceive their parents as more interpersonally distant from them, would perceive themselves as more interpersonally close to their peers, and would perceive themselves as more externally controlled. None of the several hypotheses reflecting aspects of the proposed theory were unequivocally confirmed. There were, however, some significant findings regarding drug misuse by female adolescents suggesting that they fit a more traditional feminine stereotype (less achievement-oriented, more relationship-oriented and more externally controlled than their non-misusing peers). Also drug misusers of both sexes tended to have low-achievement-oriented mothers. Methodological problems arising from a volunteer subject sample were discussed. It was recommended that future research in the drug dependence area attempt to follow a sample longitudinally, examining factors in the development of drug misuse into abuse into dependence while controlling the potentially confounding influence of rapid changes in relevant values.



## C H A P T E R    I

## INTRODUCTION

Comments on the Etiology of Drug Misuse

Drug misuse is a complex behavior with multiple etiologies. Interest in drug misuse is longstanding, for psychoactive chemicals have been used throughout history, often in ways which are not acceptable to the majority of the general population. Persons who misuse drugs, as Kleber (1974) has pointed out, are the population at high risk for drug abuse (that is, more negative than positive consequences of use) and drug dependence (inability to function adequately without the drug use).

Kleber has provided the following categories of potential causal factors: (a) availability (the accessability of particular drugs); (b) disease (all individual case factors, such as physical disease, genetic predeterminants, biochemical imbalance, personality dynamics, and family influence); (c) socioeconomic (financial and experiential deprivation caused by class inequities); (d) social (values and attitudes related to societal standards); and (e) combinations (complex interactions of the preceding types of factors). Most etiological theories combine elements from these classes; that is, they recognize no single variable as sufficient for the development of misuse, abuse, or dependence.

The methodologies that have been employed to investigate drug use behavior have generally been of two varieties: small case sample and epidemiological. To understand the popularity of these methodologies, it is important to know something of the history of treatments of drug dependence.

Mental health professionals have until recently been extremely reluctant to involve themselves in serious efforts to assist persons with drug-related problems. Part of the hesitancy likely goes back to the old concept of drug abuse as a "defect of the will," and not an "illness." As such, it was an anomaly outside the domain of the medical model (and therefore, mental health care). Drug dependence treatment was left to concerned nonprofessionals, and none were more concerned than the drug-dependent persons themselves. Self-help groups begin and grow most readily when a sizable minority with a common problem perceives itself as having been ignored by the mainstream. It is not surprising, then, that Alcoholics Anonymous (A.A.) has had a dominant influence upon the treatment of chemical dependence. Synanon, probably the best-known program for the treatment of dependence on drugs other than alcohol, was an offshoot of A.A. Self-help groups tend to function via a dogmatism that discourages (and in the case of Synanon, prohibits) the systematic investigation of their techniques and philosophy, but encourages favorable clinical impression publicity (for



example, Casriel and Amen, 1971; Yablonsky, 1965). It has taken the recent upsurge of polydrug abuse by individuals not very responsive to the traditional treatment approaches to focus research efforts in the direction of more closely-controlled studies.

Much of this recent research has been epidemiological, aimed at discerning which of the variables from Kleber's categories are in fact related to high risk for drug use problems. There are two reasons for this. The first is the complexity of the phenomenon in question. When the issue is extremely confusing and the previous work unconvincing and undoubtedly biased, it becomes appropriate to do large-scale multivariate studies. Secondly, it is unethical to perform manipulations with human subjects which could knowingly increase the potential for drug misuse. This is a factor which virtually rules out direct cause-effect studies of etiology, except with subhuman subjects (breeding for ethanol preference in rats and the like). Therefore, the multivariate approach remains one of the best methods available for the task.

Two other issues involving the existing etiology research deserve early mention. The clinical impression reports almost exclusively, and the multivariate studies to a great extent, have dealt with male subjects only. Suffet and Brotman (1976) point out that even those studies of differential

rates of use that have included both male and female subjects have mostly treated sex as a variable secondary to age, race, life style, and so on. Further, as Braucht, Brakarsh, Follingstad, and Berry (1973) mention, much of this research has examined college, clinic, and delinquent populations--groups not representative of the general population. Relatively few studies have been based on high school or younger populations, with whom earlier identification for the purpose of intervention would be most useful. As a result, serious gaps in both data and explanatory theory exist.

Sexual Identity      Difficulty as an  
Etiological Factor in Drug Misuse

An hypothesis suggested by psychodynamic and social learning orientations is that sexual identity maladjustment as a function of disturbance in the family of origin predisposes individuals to drug misuse. Rotter's (1959) social learning theory considers the possibility that a certain response will occur in a particular situation to be a function of the expectancy that the response will be reinforced plus the value to the individual of the reinforcement. As Bandura and Walters (1965, p. 2) point out, Rotter's theory presumes that a situation response hierarchy has already been established and is therefore unable to explain how new behaviors are learned. In their modeling theory, Bandura and

Walters (Chapter 1) consider antecedent stimuli (especially the characteristics of the social model), the reinforcement history of the individual, and the training techniques that have been previously employed with the individual as important determinants of the development of social behaviors. The model exhibits a novel behavior, one which the observer has not yet learned to make. The observer's inhibitory responses are usually strengthened if the model is punished for the behavior and weakened when the model is rewarded. Often, the behavior observed is not a novel one; the performance of that behavior by the model merely acts to facilitate its performance by the observer. Observers combine behaviors from different models to produce their own innovative behaviors; they abstract common elements from diverse models to organize general rules for moral behavior. Parents are the most salient models for the younger child. It is not unexpected, then, that alcoholic parents are more likely to have children who become alcoholics. The typical finding, as cited by Roe (1944), is that 30% to 40% of the sons of alcoholics become alcoholic themselves, a figure about two to three times that for the general population. Smart and Fejer (1972) have similarly found that drug use in adolescents relates in drug of choice and frequency of occurrence to that of their parents.

Probably the best known (and most controversial) psychoanalytic conceptualization of drug misuse is found in Menninger's (1938, pp. 143-155) discussion of the self-destructive motivation of alcoholics. According to Menninger, the parents of future alcoholics ". . . are peculiarly unseeing with regard to the sufferings of their children" (p. 143). The parents lead the child to expect more gratification than is forthcoming, eventually causing the child to experience strong ambivalent love-hate feelings. The internal conflict leads the person to drink excessively as both an expression of hostility toward the parents and an alleviation of the guilt arising from the hostile emotions.

Noting that the father of the alcoholic is often a heavy drinker, Menninger professes that ". . . for a father to be alcoholic is an easy way for the son to learn how to effect the retaliation he later feels compelled to inflict" (p. 155). Newell (1950) describes the alcoholic father's effects of inducing powerful conflicting feelings within his children. When sober, the father may be pleasant, socially adept, and overwhelmingly positive in his communications to his family. From his guilt, he may, however, attempt to "buy love" from his children with gifts and promises. He may plead for forgiveness and understanding. When intoxicated he is a changed person, someone to be feared and avoided. The capricious incongruity of his behavior interferes



with the learning by his children of clear standards for behavior. The male children, according to Ward and Faillance (1970), may respond in several different ways. If lucky, they will find an adequate same-sex role model elsewhere and suffer little damage. They could identify with the non-alcoholic parent, who is trying with much difficulty (Jackson, 1954) to model both masculine and feminine characteristics, with the possibility that a sexual identity problem will emerge if that parent is unsuccessful (Cornwall, 1968). The final and least desirable alternative for the child is to imitate the alcoholic father, encouraged by a conceptualization of drinking as a masculine assertion of independence. Parker (1969) and Zucker (1968), using different sex-role instruments, found that male adolescent problem drinkers in general want to appear very masculine.

Another family situation frequently observed to increase the chances that drug use problems will arise in the children is the permanent absence of a parent from the household, as by death or divorce. Johnston (1973), for example, found marijuana use to be related to origins in broken families in a survey of 2,200 subjects nation-wide; the same was true for the 1,700 adolescents studied by Tec (1970). A broken home was a significant correlate of illicit drug use by Portland, Oregon high school students, according to Johnson,

Abbey, Scheble, and Weitman (1972). Similar findings were reported by Gillie (1969) and Harris (1971). Oltman and Friedman (1967) had previously discovered a higher than average incidence of broken homes in the nuclear families of opiate-dependent persons. Bleuler (1955), Oltman and Friedman (1953), and Tahka (1966) had reached the same conclusion in regard to alcoholics. The rate of alcoholism in children from broken homes matches closely the rate from alcoholic parents. A possible interpretation is that the risk for alcoholism (at least for males) increases with the disturbance of the family by either the absence of a parent or by the intermittent incapacitation of the father by an alcohol problem.

A series of chained events is proposed here to explain the influence of sex-role development on drug misuse. The initial step in the process concerns the characteristics of effective models of sex-valued behaviors. Kohlberg (1966) has discussed the importance of a warm (that is, nurturant) father-figure in the development of masculine preference in boys. Kagan (1964) stresses the necessity of a model perceived as nurturant by the child for the initiation of sex-role development. Mischel (1966), however, does not agree that a nurturant relationship with the model is necessary for imitation to occur; a model who is perceived as having power

alone is sufficient. He does not dispute that nurturance may facilitate imitation. The self-adoption by the male child of an alcoholic father's heavy drinking as a masculine attribute has ties with the imitation of (identification with) an inconsistently nurturant, but powerful model. It also fits directly into Burton and Whiting's (1961) discussion of one of the likely consequences (cross-culturally) of a matriarcal family structure: male children develop exaggerated masculine behavior to defend against cross-sex identification.

According to Kohlberg, boys generally perceive themselves as more similar to their fathers; girls, their mothers. Thus, same-sex parents tend to be more salient than opposite-sex parents as models. Under favorable conditions, girls have identified primarily with their mothers throughout life. Boys are at first dependent on and identify with their mothers, but switch allegiances to their fathers by age six. A study by Mussen and Distler (1959) suggested that (a) sex-typing for boys depended more on the relationship with the fathers than with the mothers, (b) the masculine identification important to role-modeling did not depend on any one specific style of relationship (for example, nurturant), and (c) the significance in the boy's lives of the fathers in regard to controlling both rewards and punishments was the most important determinant of identification. Fathers perceived as both non-nurturant and weak, then, are very likely to be

unsuccessful in fostering in boys those traits which are socially valued for males.

It should be noted that the term identification has been used mostly in the context of personality theory and imitation, in experimental psychology (Bandura & Walters, 1965, p. 89). Freud (1960, Chapter 3) categorized identification as either anaclitic or aggressive in origin. The formal type arises when a nurturant adult threatens to withhold rewards, prompting the child to introject the characteristics of the adult in an attempt to regain gratification. Aggressive identification tied to the Oedipal conflict involves a boy's introjection of his father's characteristics to avoid being punished by the father for feelings toward his mother. Role theory defines imitation as the performance of responses similar to those previously produced by a model. Kohlberg, disagreeing with the analytic and behavioral orientations, views gender identity as the basic factor in sex role development. A child first makes a self categorization as boy or girl, and identifies increasingly with models perceived as similar. The appearance of masculine versus feminine values, then, proceeds rather than follows identification. As Bandura and Walters (p. 89) have pointed out, however, these concepts of identification and imitation in practice refer to the same phenomenon, the "tendency for a person to reproduce the actions, attitudes or emotional



responses, exhibited by real life or symbolized models." The term identification is used here in that context.

The traditional conceptualization of masculinity and femininity has been bipolar extremes of one continuum, as illustrated in two of the most popular sex-role instruments, the Masculinity-Femininity Scale from the California Psychological Inventory (Gough, 1957) and the Masculinity-Femininity Scale from the Adjective Check List (Gough & Heilbrun, 1965). This view has recently been sharply challenged. Bem (1975) presented data from two studies which indicate that individuals who are highly "sex-typed" (very "masculine" or very "feminine" in their self-described sex-role attributes) have serious problems when situations call for behavior which is outside their typologies. In performing the "masculine" task asserting an opinion about the humorousness of a cartoon despite

pressure for conformity to the contrary, feminine males conformed most. When the "feminine" task of playing with a kitten was presented, masculine males (and feminine females) did poorly. Bem suggests that a high level of sex-typing considerably restricts the repertory of available behaviors.

Conceptualizing masculinity and femininity as separate and independent dimensions has been proposed by a number of investigators (Bem, 1974; Block, 1973; Carlson, 1971, Constantinople, 1973; Jenkin & Vroegh, 1969; Spence, Helmreich, & Stapp, Note 1). Heilbrun (1976) has presented separate masculinity and femininity scales by identifying, respectively, those items from the Adjective Check List Masculinity-Femininity Scale that discriminated between college males who identified with masculine fathers and college females who identified with feminine mothers. Both Bem and Spence et al. used ratings from male and female judges of the desirability of a number of personal attributes (for example, kindness, assertiveness, individualism, tact) for males and for females to develop sex-role instruments by which masculinity and femininity are measured with independent scales. There are important differences in the construction of these instruments which reflect theoretical discrepancies. The Bem Sex-Role Inventory includes items judged as more desirable for males (Masculinity scale), items more desirable for females (Femininity scale), and items neutral with respect to sex (a Social Desirability scale). Spence et al.'s

Personal Attributes Questionnaire uses items judged more typical of males, but valued for both sexes, as a masculinity scale and items more typical of females but valued for both sexes as a femininity scale. Items valued only for the sex they were judged typical of constitute a Sex-specific scale. Bem presents the concept of androgyny, operationally defined via her inventory as an equal endorsement of masculine and feminine attributes. To be androgynous, then, is to have a psychologically healthy balance of sex-role characteristics. Spence et al.'s interpretation of their own questionnaire is that the greater each of the masculinity and femininity scores for an individual, the better (since all the potentially endorsed attributes on both of these scales are valued for both males and females). One implication for sex-role development, however, is the same in either case: Parents with both masculine and feminine attributes should be better role models than parents who show predominantly sex-typed characteristics.

The question of what traits are masculine and what traits are feminine has, as Bem points out, historically and cross-culturally been along the lines of two complementary and independent groupings. Masculinity generally refers to being assertive and achievement-oriented; femininity, to being receptive and oriented to the welfare of others. Parson and Bales (1955) referred to these constellations as, respectively, instrumental and expressive

behavior. Bakan (1966) terms those basic styles sense of agency and sense of communion. These notions are not very different from those implied in the previous discussion of power and nurturance, nor from Burton and Whiting's (1961) proposal that status envy and love are the two motivators of identification. Kagan's and Kohlberg's conclusions might be restated in light of the emphases of the work of Bem, Spence et al., and others: The possession of female-valued sex-role attributes (nurturance) makes a father a better model for his son. Such a model promotes the development of sexual identity, which Block (1973) defines as a sense of self that contains a gender recognition secure enough to allow the individual to exhibit "unmanly" or "unwomanly" characteristics. Further, the absence of a viable same-sex role model does not necessarily predict a sexual identity problem (Rychlak & Legerski, 1967). Only when a boy, for example, rejects both his father and the dominant-ascendant ("masculine") attributes of his mother will maladjustment occur.

Factors influencing sexual identity take on special significance during the adolescent period. It is then, Kohlberg says, that the person cognitively evaluates the mass of behaviors of available role models, examines his or her own behaviors, and then decides which aspects of sex-role typology are valuable and worth permanently incorporating.

Difficulties with sexual identity may be reflected during adolescence in behavioral and emotional problems. Frequently those problems center about rejection of traditional social values. Alienation from society has been shown to be associated with delinquency (Gold, 1969). Several studies (Goode, 1964; McCord, McCord & Verden, 1972; Monahan, 1960; and Smith, 1962) have established positive correlations between delinquency and father-absence. Advocating the use of illicit drugs may be another reflection of adolescent alienation. Schoolar, White, and Cohen (1972) and Edwards, Bloom, and Cohen (1969) found that drug abusers were more likely to be defiant and critical than nonusers; the same hostility toward authority was noted by Hogan, Mankin, Conway, and Fox (1970) in marijuana users. Keniston (1965) saw drug use as an outgrowth of alienation and lack of commitment. It is not surprising then that delinquency and regular drug use have been shown to be related (Martin, 1976; Willis, 1971), as have drug use and adolescent emotional problems (Brown, 1971; Casriel & Amen, 1971).

To summarize, it is here proposed that one predisposing facet of drug misuse is poor sex-role modeling by parents. The connection is as follows: (a) Role models who are in consistent control of both rewards and punishments and who can provide for the child good examples of both "masculine" and "feminine" behaviors are crucial to the process of



identification; (b) poor sexual identity adjustment is related to psychosocial disturbances during the especially-important adolescent period; and (c) one characteristic of adolescent disturbance often seen is the rejection of prevailing behavior norms, including those concerning the use of drugs.

### Alienation and Drug Misuse

One observed component of the alienation of the person who misuses drugs is an altered interpersonal style. The concept of distancing oneself from others fits extremely well with the use of drugs, both symbolically (rejection of external behavior norms) and more literally (via a state of intoxicification). Casriel and Amen (1971) and Laskowitz (1965) have described detachment as the major defense mechanism of the drug addict.

Nowhere is alienation more apparent than in the original significant set of relationships (just discussed relative to sex-role modeling), those between adolescent and parents. Numerous studies and clinical impression articles have pointed to strained parent-child ties as concomitants of drug misuse and abuse (for example, Globetti & Brizance, 1971; Marin & Cohen, 1971; Oltman & Friedman, 1967; Streit & Oliver, 1972; Tec, 1970; and Wittenborn, Britt, Smith, & Wittenborn, 1969). There is evidence that male narcotic addicts tend to be especially alienated from

their fathers. Male addicts have described their fathers in consistently negative terms, such as weak (Hirsch, 1961; Nyswander, 1956), aloof (Frazier, 1962; Lerner & Teffenteller, 1964), and non-nurturant (Eldred, Brown, & Mahabir, 1974). Fathers were seen, then, as lacking in either achievement- and/or relationship-orientation. In his review of the literature on this topic, Seldrin (1972) concludes that the male addict suffers from poor conditioning in the husband and father roles.

Kerr (1975) has compiled histories of females in their mid- to late-twenties who had been polydrug users. In her attempts to draw together the etiologies of her interviewees, Kerr focuses on the relationships between the former abusers and their mothers. As adolescents, these females increasingly perceived that they were "different" from the usual female in that they experienced strong aggressive feelings. These feelings created more and more discomfort with time. (Block, Von der Lippe, & Block, in a 1973 paper, pointed out the difficulty encountered by women in openly maintaining both masculine and feminine role characteristics.) As adolescents, Kerr's subjects saw themselves as being similar in personality style to their mothers, but concurrently grew to dislike their mothers' apparent failure to live up to potential. (Keniston, in 1965, described the mothers of drug misusers as women with ability who had

sacrificed career opportunities in favor of housewife duties.) The implication to the adolescent females was that they were, being similar to their mothers, also destined to underachieve. This perception precipitated a sexual identity dilemma. Drug use followed, as rebellion against the society that discriminates, or as an escape from the prophecy.

In the process of rejecting traditional standards of conduct, adolescents may ally themselves more closely with a peer group. Peers can give validation to the rebellion by adopting opposition to authority as its main ethic (Suchman, 1968); and the drug use can become a badge of protest (McAree, Steffenhagen, & Zheutlin, 1969). The involvement of the peer group with drug misuse has been commented on frequently (for example, Freedman, 1968; Ludwig & Loving, 1965; and Scher, 1966). Even for the person heavily dependent on drugs, peer respect remains important (Laskowitz, 1965). It has been shown that frequency of use by friends is by far the strongest predictor of drug use (Schulz & Wilson, 1973); these author's interpretation of this finding is that adolescent drug use is much more a matter of "fad and fashion" than an indicator of rejection of standard values. This explanation is apparently an attempt to minimize the importance of personal factors in choices regarding drug use. But adolescents quite



conceivably choose friends who have values and interests perceived as similar to their own (as, values conducive to drug use). The bases for that choice, of course, are personal factors. One further consideration is raised by Bowerman and Kinch (1959). They maintain that a lowered orientation of the adolescent toward the family occurs only when distinct intrafamilial problems are present; a high degree of affiliation with peers alone is not sufficient to cause estrangement from the family. It follows that a pre-existent distancing of parents would increase the significance of peer relationships.

#### Locus of Control and Drug Misuse

If distancing is an important defense mechanism of persons who misuse drugs, then the environment must be seen by these persons as potentially hostile, capricious, and threatening. According to Laskowitz (1965), the self-induced isolation of drug abusers is a safeguard from both intrapsychic guilt and any possible interpersonal repercussions from their actions. The fact that misuse of drugs virtually always violates some law obviously gives this view of the world a firm basis in reality. The line between paranoia and rational fear becomes exceedingly thin.

Such a perception of the environment is consistent with Rotter's (1966) description of external locus of control expectancy. That is, the individual sees his or her behavior as followed by reinforcements which are "the result of luck, chance, fate, as under the control of powerful others, or as unpredictable because of the forces surrounding him." The parents of drug misusers, as they have been described in preceding sections, tend to be weak, distant, and inconsistent. Such a situation in the family of origin would likely foster in the children a mistrustful and aloof attitude toward adults. Duke and Fenhagen (in press) have labelled this an "externalogenic" environment, one that is conducive to the development of an external locus of control expectancy.

The perception of external control has been demonstrated in several socially-maladaptive conditions: schizophrenia (Cromwell, 1963; Duke & Mullins, 1973), alcoholism (Goss & Morosko, 1970; Nowicki & Hopper, 1974), and delinquency (Duke & Fenhagen, in press). It would be anticipated, then, that the same would be true for drug misusers. The research on locus of control of misusers, however, has been confusing and apparently contradictory. Berzins and Ross (1973) found their opiate-dependent subjects to be internals (that is, believing themselves to be in control of the consequences of their behavior). Other studies, however, have determined

delinquent regular drug users (Obitz, Oziel, & Unmacht, 1973), adolescent regular users and experiments (Davison & Parsons, 1973; Gold & Coughlin, 1973); and young opiate-dependent subjects (Obitz, Cooper & Madeiros, 1974) to be externals. Calicchia (1974) has provided a plausible explanation for the inconsistency. Noting that the Berzins and Ross subjects had rather long-term drug habits, he designed a study to investigate differences relating to length of dependency. He found that, while his own subjects were, in fact, internals, the degree of internality correlated positively with length of dependency. Further, subjects who were at the time of the study being maintained on methadone were more internal than subjects on a drug-free status. Calicchia concluded that internal locus of control of drug-dependent persons is a function not of social experience, but of drug experience; that is, they learn increasingly to control perceptions of the environment by using drugs. Addicts, he feels, were "probably external before their addiction." Those results suggesting that users are externals and those finding that they are internals may all be accurate, then, depending on the age and drug use experience of the population studied. If the Calicchia explanation is correct, external locus of control is one correlate of drug misuse by adolescents.

### The Current Study

Previous research efforts concerning the etiology of drug misuse, abuse, and dependence have been criticized for a number of inadequacies and inconsistencies. Braucht et al. (1973), in their review of the literature concerning deviant adolescent drug (including alcohol) use, mention numerous recurrent problems, which may be categorized as follows:

1. Subject problems
  - a. Varied populations (college, high school)
  - b. Inherently biased populations (clinic, prison, college, delinquent)
  - c. Little investigation of female subjects
  - d. Difficulty obtaining volunteer subjects
  - e. Questionable accuracy of information obtained
2. Design problems
  - a. Overemphasis on small-sample research
  - b. Little longitudinal research
  - c. Dependence on retrospective perceptions (as, memories of how parents were)
  - d. Little predictive research (as, with high school users, misusers)
  - e. Lack of coordination between sociocultural and personality variables

- f. Little coordinated study of same variables in different use groups (as, narcotic addicts, problem drinkers, psychedelic drug users)
- 3. Theoretical problems
  - a. Ambiguity in concept definitions (as, sexual identity)
  - b. Variables chosen for investigation without theoretical rationale

It is recognized that there are many potential correlates of drug misuse. This study attempts to offer validity for one etiological theory by analyzing separately these correlates. The questionnaire package used includes instruments to examine subjects' perceptions of characteristics of their parents as sex role models; identification with their parents as manifested in similarity of sex role attributes; sex identity in terms of subscription to valued male and female attributes; psychosocial adjustment as reflected in interpersonal distancing of parents and peers, locus of control, and type and frequency of drug use.

The design seeks to avoid the majority of the shortcomings just elaborated. It is an investigation of several drug-use groups, males and females, within a single, high school (and therefore predictive) population. Questions regarding the validity of self-report data and the use of volunteer subjects still remain; and the study is not



longitudinal.

The hypotheses are these:

Hypothesis 1: Regular illicit polydrug users (by definition, misusers) perceive their parents as possessing masculine- and feminine-valued characteristics to a lesser degree than do experimental users or nonusers.

Hypothesis 2: Regular users identify less with their parents than do experimental users or nonusers.

Hypothesis 3: Regular users perceive themselves as possessing masculine- and feminine-valued characteristics to a lesser degree than do experimental users or nonusers.

Hypothesis 4: Regular users perceive their parents as more interpersonally distant from them than do experimental users or nonusers.

Hypothesis 5: Regular users perceive their peers as more interpersonally close to them than do experimental users or nonusers.

Hypothesis 6: Regular users perceive themselves as more externally-controlled than do experimental users or nonusers.

## C H A P T E R    I I

## METHOD

Subjects

The subjects for the major analyses consisted of 178 11th- and 12th-grade students from two high schools in the western portion of Gwinnett County, Georgia. Gwinnett County is located at the eastern edge of the metropolitan Atlanta area. The County has been experiencing rapid population growth in recent years. When this study was conducted (1975), the County's population was approximately 105,000, which is roughly double the 1965 population. Most of the influx has been of middle-income white families, so that the western part of the County is now largely a "bedroom community" of single-family dwelling housing developments. The eastern third of the County has remained predominantly rural; most of the County's black residents (who comprise only 3% of the total population) live there.

Procedure

School A was surveyed in May, 1975. Participation was voluntary, in keeping with the school system's research policy. Letters to parents (Appendix A) describing the study were passed out to juniors and seniors by their home room teachers. (The school administration stipulated that no class time was to be devoted to the project.) Students

whose parents signed the letter's consent statement were given self-administered anonymous research instruments to complete and deposit in a sealed box outside the main office. Of the 581 males and 583 females (total = 1164) in the pool, 39 males and 78 females (total = 117) returned completed questionnaire packages. (Thirteen questionnaires were returned with substantial information missing.) This return rate (10.05%) was far below expectations.

The need for sufficient returns for an analysis prompted the administration of the survey in an additional high school in October and November of 1975. The procedures at School B were the same as for School A, except that the school system's research committee allowed that the letter to parents be modified so that a parent's signature declined permission for the participation of that student in the study, rather than approved it. Of the 496 male and 476 female (total = 972) 11th- and 12th-graders at School B, 32 males and 32 females (total = 64) returned completed questionnaire packages. (There were five incompletes.) That completed-return rate of 6.58% was lower than at School A, even with the first school's more rigorous consent policy,  $z = 4.066$ ,  $p < .001$ .

A further investigation of the returns indicated that more females than males responded overall,  $\chi^2 (1) = 10.556$ ,  $p < .005$ , and that proportionately more males responded from



School B than School A,  $\chi^2 (1) = 757.177$ ,  $p < .001$ . There was no difference between schools in socioeconomic status as categorized by the Hollingshead (Note 2) criteria,  $\chi^2 (1) = .815$ ,  $p > .20$ . Of the subjects, 5.6% were in Class II; 44.4%, Class III; 33.3%, Class IV; and 16.7%, Class V. The mean ages (in months) of the respondents differed between schools,  $t (174) = 5.239$ ,  $p < .001$ ; the respondents from School A were an average of 7.49 months older than those from School B, as would be predicted, of course, from the discrepancy in school year timing when the returns were collected.

Despite the differences found, it was decided for several reasons that the subjects from the two schools could be grouped together for analysis. First, the finding of no socioeconomic status difference between schools is an important one, as Braucht et al. (1973) have noted that variable to be one for which the studies they review consistently are in accord: "While there is considerable agreement concerning the finding that adolescent psychedelic users come mainly from the middle and upper classes, this is where the consensus terminates." Further, the age difference is less disconcerting in light of previous research. The limitation here to juniors and seniors was initially made because other studies (Barr, 1974; Hager, Vener, & Stewart, 1971; Martin,

1976) have found few differences in high school students over age 16 in frequency or type of drug use.

The 181 subjects (71 males, 110 females) were divided into drug-use categories from their questionnaire responses. There has been no drug-use questionnaire which has gained widespread acceptance; nearly every interested researcher has developed a unique instrument (e.g., Carman, 1974; Galli, 1974; Hager et al., 1971; Horan, Wescott, Vetovich, & Swisher, 1974; Johnson et al., 1972; Johnston, 1973; Lerner, Linder, & Drobet, 1974; and Martin, 1973). These studies have reported a low incidence of incomplete or obviously distorted responses, lending credence to the validity of the anonymous self-report method. Further, Clark and Tifft (1966) demonstrated a high degree of consistency between questionnaire responses and subsequent polygraph results. The findings of Horan et al. (1974) study suggest that subjects report use much more readily via questionnaire than interview, even "anonymous" (no names) interview. The questionnaire used here is a modification of the reporting form utilized by the Georgia Department of Human Resources to classify the drug involvement of clients entering its treatment programs. (The entire questionnaire package utilized in this research appears as Appendix B. The instruments in the appendix have been labelled for the reader's reference.) To items from the

original were added examples illustrative of each drug type. The categories of nicotine and caffeine were additions intended to give virtually all subjects the necessity of endorsing one type of use, hopefully increasing the chances of respondents' answering the more threatening items more truthfully.

A categorization of the subjects was made following the general format used by Adler and Lotecka (1973) and similarly, by Lewis and Trickett (1974). In both of these studies, subjects were classified by reported drug type (alcohol; cannabis; stimulants, depressants other than alcohol, hallucinogens; and narcotics were the categories in both studies), in conjunction with frequency of reported use. Adler and Lotecka's subjects were grouped as nonusers, "tasters" of various drugs, and habitual users of various drugs; Lewis and Trickett's subjects as nonusers, legal users, marijuana users, mixed-low users, and mixed-high users. Hamburg, Kraemer, and Jahnke (1975) found this type of clustering to be fairly stable, lending them to feel that the use patterns within a cluster are seen by adolescents as involving similar "essential ingredients of decision-making." The existence of such clustering, the authors maintain, tends to refute the progressive-step theories of drug use. Certainly, few high-schoolers have moved up the drug "hierarchy" to narcotic use. In Adler and Lotecka's study, 2% of the

subjects had used narcotics; in Lewis and Trickett's, none. None of the respondents in this research reported any narcotic use.

Each of the 181 subjects was initially assigned to one of seven groups (subjects whose use patterns overlapped groups were classified in the last appropriate category in the sequence presented here): (a) nonusers--no use except of caffeine and/or nicotine (53 subjects); (b) experimental alcohol users--alcohol once a week or less often (58 subjects); (c) experimental cannabis users--marijuana and/or hashish once a week or less often (19 subjects); (d) experimental polydrug users--at least one illicit drug in addition to cannabis once a week or less often (13 subjects); (3) regular alcohol users--alcohol several times a week or more often (three subjects); (f) regular cannabis users--cannabis several times a week or more often (17 subjects); or (g) regular polydrug users--at least one illicit drug in addition to cannabis more often than once a month (18 subjects). It will be noted that the frequency criterion for regular polydrug use was set lower than for the other regular use categories. This was done because of the infrequent use of illicit drugs other than cannabis in the sample (17.1%), relative to cannabis use (37.0%) and alcohol use (70.7%). This procedure follows the examples of Johnson (1973) and Tolone and Dermott (1975). Other researchers

have, for the same reason, used a system giving additional numerical weights to non-cannabis, illicit frequencies (Carman, 1974; Galli, 1974; Horan et al, 1974).

Table 1 presents the category overlaps in the classification system. This information demonstrated similarities between the experimental cannabis and experimental polydrug groups. There were high proportions of nicotine use in both groups. An inspection of the questionnaires of the polydrug respondents showed that their reported illicit (other than cannabis) use was nearly always the infrequent use of hallucinogens. It was decided to combine these two groups into an experimental illicit users group. The small regular alcohol users group could not be readily incorporated into any other group and was dropped from further study.

The 178 (109 females, 60 males) experimental subjects, then, were arranged for analysis in five groups: (a) non-users (53 subjects--16 males, 37 females); (b) experimental alcohol users (58 subjects--20 males, 38 females); (c) experimental illicit users (32 subjects--11 males, 21 females); (d) regular cannabis users (17 subjects--11 males, 6 females); and (e) regular polydrug users (18 subjects--11 males, 7 females).



Table 1

Summary Table of Number of Subjects Overlapping Drug Use  
Category Criteria

Categories Overlapped	Classification Category						
	Nonuser (n=53)	Exper. Alc. (n=58)	Exper. <sup>a</sup> Can. (n=19)	Exper. <sup>a</sup> Poly. (n=13)	Reg. <sup>b</sup> Alc. (n=3)	Reg. Can. (n=17)	Reg. Poly. (n=18)
Exper. Alc.			19	13	--	5	4
Exper. Can.				13	3	--	--
Exper. Poly.					1	13	--
Reg. Alc.						12	14
Reg. Can.							18
Reg. Poly.							

<sup>a</sup> The experimental cannabis and experimental polydrug groups were combined to form an experimental illicit group for the major analyses.

<sup>b</sup> The experimental alcohol group was not included in the major analyses.

## Instruments

The following measures were given to all subjects for self-administration: the Personal Attributes Questionnaire (PAQ), the Parental Attributes Questionnaire (ParAQ), the Comfortable Interpersonal Distance Scale (CID), the Nowicki-Strickland Internal-External control scale for adults (ANSIE), the drug use survey discussed previously, and a demographic questionnaire.

The philosophy supporting the PAQ has been presented, and the development of the instrument is elaborated by Spence et al. (1974). The PAQ consists of 110 Likert-type items; it has Male-valued (23 items), Female-valued (18 items), and Sex-specific (13 items) scales. The Male-valued items involve characteristics stereotypically masculine, but valued for both sexes (for example, independence). The Female-valued items include stereotypically feminine characteristics that are valued for both sexes (devotion to others). Sex-specific items are valued only for the sex for which they are stereotypic (dominance). The short form of the PAQ (24 items, 8 from each scale) was utilized here.

The ParAQ consists simply of the Male-valued and Female-valued scales, but not the Sex-specific scale, from the PAQ short form. Respondents are instructed to describe each parent in turn, rather than themselves.

The CID scale was developed (Duke and Nowicki, 1972) as an improvement on the existing methods operationalizing the concept of interpersonal distance (personal space). The most widely-used technique, originated by Kueth (1962), asks the subject to place representative cloth figures on a felt board. Proximities among figures are then examined. Another interpersonal distance instrument, the Psychological Distance Scale (Tolor, Brannigan, & Murphy, 1970), is a forced-choice paper-and-pencil test. Duke and Nowicki criticize both of these measures for their lack of reliability- and validity-study backup. The CID is a paper-and-pencil application of the body-boundary rooms used by Frankel and Barrett (1971); and Horowitz, Duffy, and Stratton (1964). It consists of a page with eight 80-mm radii meeting at a central point. Subjects are asked to imagine themselves in the center (represented by the intersection point) of a round room and to imagine certain stimuli persons approaching them along the radii. The subjects mark each radius where they would begin to feel uncomfortable with that stimulus' approach. The distance (in mm) between that mark and the center is the score for that item. For this study, the stimuli are (a) a person you might want very very far from you; (b) a person you might want very very close to you; (c) your father; (d) your mother; (e) a male friend; (f) a female friend; (g) a male stranger; and

(h) a female stranger. (The first two stimuli serve only to establish "anchors" for responses to the remaining stimuli.)

Nowicki and Duke (1974) based the ANSIE on an existing locus of control scale, the Nowicki-Strickland Internal-External control scale for children (Nowicki & Strickland, 1973). The ANSIE correlates with the more widely-used Rotter (1966) scale. It has the advantage, in contrast to that measure, of being suitable to persons with as little as a fifth-grade reading level. The 20-item abbreviated form of the ANSIE is employed here.

The demographic questionnaire used in this survey is a modification of the Family Information Sheet devised by Spence (Note 3). It elicits information regarding age, sex, religious orientation, race, siblings, family income, parent's occupations and educational background, and identification of the adults responsible for the subjects upbringing.

Another instrument, the Parental Attitudes Questionnaire (95 items), was included in the questionnaire package. According to the measures' author (Spence, Note 4), a final analysis of this instrument has not yet been completed. Responses on this measure were therefore not inspected.

## CHAPTER III

## RESULTS

An examination of demographic variables preceded the major analyses. A relationship was found between sex and drug-use category,  $\chi^2 (4) = 10.995$ ,  $p < .05$ . There were more females than males in the nonuser, experimental alcohol user, and experimental illicit groups, but more males than females in the regular cannabis and regular polydrug groups.

No difference among drug use groups on socioeconomic status was discovered,  $\chi^2 (27) = 26.344$ ,  $p > .20$ . Drug use was not related to birth order (oldest, middle child, youngest, or only child),  $\chi^2 (27) = 25.706$ ,  $p > .20$ ; or to religious affiliation (Catholic, Greek Orthodox, Protestant, Jewish, other, or none),  $\chi^2 (8) = 8.612$ ,  $p > .20$ . Neither was a relationship discovered between drug use and broken homes (defined here as living at some point with other than both natural parents or the adults responsible for upbringing),  $\chi^2 (9) = 9.257$ ,  $p > .20$ .

Because drug use group classification was related to sex, but not to the other demographic variables, it therefore became desirable to use sex as an independent variable along with drug use in testing the study's hypotheses by the use of two-way analyses of variance. The widely-divergent cell frequencies presented clear difficulties for the analysis, however. Preliminary applications were made



of Bartlett's (1937) test for homogeneity of variance and unintentionally, as Myers (1966) notes, for departures from normality, to sets of data concerning 18 dependent variables. Eight of the tests were significant. Nearly half of the data, then, did not meet the criteria necessary for the employment of analyses of variance. An alternative use of nonparametric statistics would have meant much lost information. The approach taken here was instead to rank all the scores in each data set, transform those ranks into normalized scores by using the table given by Walker and Lev (1953), and perform analyses of variance on the normalized rank scores. This method (Winer, 1962) requires only the assumptions of more-than-ordinal data and a normal population distribution. All of the following analyses (except where noted) were two-way analyses of variance using the disproportionate cell frequencies as potentially indicative of disproportionate population frequencies. The results of the analyses are summarized in Table 2. Means for significant effects are listed in Table 3.

### Age

Age (Figure 1), the demographic variable for which an analysis of variance was appropriate, was not related to drug use group,  $F(4, 167) = .296$ ,  $p > .20$ , or sex,  $F(1, 167) = .006$ ,  $p > .20$ , in this group of 11th- and 12th-graders.

Table 2

Summary Table of F Values for Two-way Analyses of Variance

Measure	Source of Variance		
	Sex	Drug Use	Sex vs. Drug Use
Age	0.006	0.296	0.052
Total Male-valued	0.027	1.751	1.360
Father, Male-valued	0.037	0.431	1.612
Mother, Male-valued	0.223	6.347****	2.597**
Total Female-valued	0.002	1.172	0.376
Father, Female-valued	0.053	0.106	0.305
Mother, Female-valued	0.579	1.518	13.064****
Similarity to Father	14.634****	2.482**	1.255
Similarity to Mother	0.342	1.952*	0.356
Self, Male-valued	13.898****	2.370*	3.430***
Self, Female-valued	7.490***	1.972*	2.724**
Self, Sex-specific	45.113****	1.238	3.607***
Total Parent Distance	0.000	0.358	0.241
Distance, Father	0.077	1.757	0.626
Distance, Mother	0.056	0.879	1.238
Distance, Father/Mother	0.549	2.058*	0.623
Total Peer Distance	0.617	1.140	0.148
ANSIE (Locus of Control)	0.698	1.759	3.423***

\* $p < .10$ \*\* $p < .05$ \*\*\* $p < .01$ \*\*\*\* $p < .001$

Summary Table of Means of Normalized Rank Scores For  
Analyses of Variance with Significant F Ratios

Analysis	Means <sup>a</sup>				
	Nonuser	Exper. Alc.	Exper. Illicit	Reg. Can.	Reg. Poly.
Mother, Male-valued					
Males	53.875 (22.000)	51.950 (19.947)	52.182 (20.454)	46.364 (14.909)	51.545 (19.545)
Females	53.081 (20.892)	52.895 (20.737)	50.714 (18.762)	45.833 (15.000)	49.286 (17.286)
Mother, Female-valued					
Males	44.938 ( 7.625)	45.450 ( 8.350)	48.091 ( 9.454)	44.636 ( 7.636)	47.182 (10.000)
Females	44.811 ( 8.189)	43.316 ( 7.579)	46.333 ( 9.095)	51.000 (12.833)	41.428 ( 5.428)
Similarity to Father					
Males	46.125 (11.625)	41.600 ( 7.400)	43.454 ( 8.545)	42.364 ( 7.818)	46.700 (12.900)
Females	47.919 (13.486)	48.526 (13.474)	46.850 (12.100)	43.167 ( 9.167)	52.000 (18.143)
Self, Male-valued					
Males	52.750 (21.500)	54.150 (22.650)	55.182 (21.273)	55.182 (23.636)	54.364 (23.182)
Females	51.243 (20.459)	50.342 (19.816)	53.143 (21.714)	50.500 (20.000)	44.571 (15.571)
Self, Female-valued					
Males	48.812 ( 9.062)	48.750 ( 9.450)	48.909 ( 9.182)	52.545 (11.636)	49.818 ( 9.818)
Females	46.540 ( 7.432)	47.210 ( 8.105)	47.667 ( 8.286)	49.167 ( 9.333)	42.143 ( 4.857)
Self, Sex-specific					
Males	51.750 (16.312)	53.050 (17.850)	51.454 (16.364)	53.545 (18.182)	54.273 (18.636)
Females	46.703 (11.919)	47.368 (12.632)	48.667 (13.667)	50.000 (15.000)	47.000 (12.143)
ANSIE					
Males	45.062 ( 7.000)	45.300 ( 6.700)	49.091 ( 8.636)	47.182 ( 7.727)	44.727 ( 6.636)
Females	46.270 ( 7.135)	47.289 ( 7.556)	46.667 ( 7.238)	41.833 ( 5.000)	52.143 (10.000)

<sup>a</sup> Numbers in parenthesis indicate the means of the raw scores

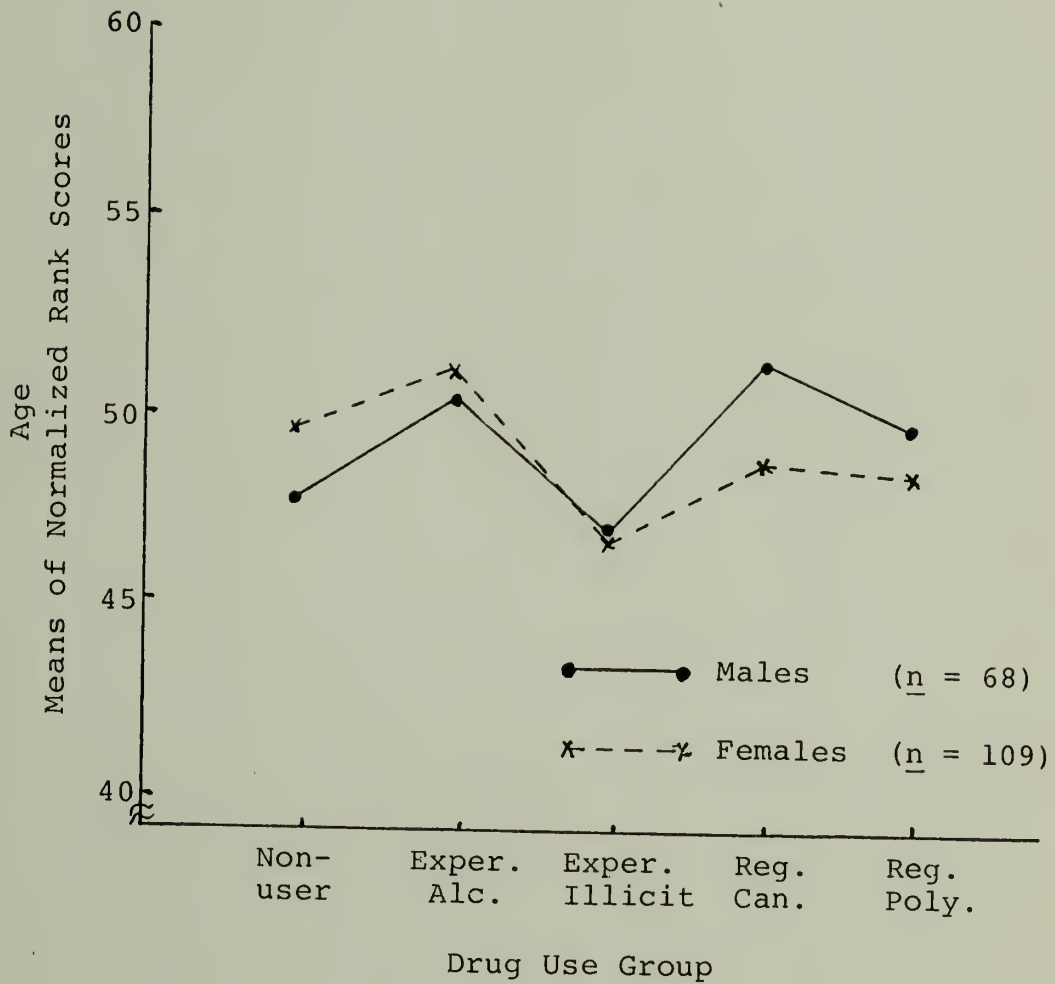


Figure 1. Means of age (in normalized rank scores) of high school subjects as a function of sex and drug use group

Hypothesis 1: Regular users perceive their parents as possessing masculine- and feminine-valued characteristics to a lesser degree than do experimental users or nonusers.

For each subject who reported data concerning both parents ( $n = 176$ ), the Male-valued scores from the ParAQ for mother and for father were added to give a Total Male-valued score (Figure 2). No relationship was found between the Total Male-valued score and drug use,  $F(4, 167) = 1.751$ ,  $p > .20$ .

The Male-valued scores for each parent were analyzed separately. Male-valued scores for fathers (Figure 3) were not related to drug use,  $F(4, 167) = .431$ ,  $p > .20$ , or sex,  $F(1, 167) = .037$ ,  $p > .20$ . Sex and Male-valued scores of mothers (Figure 4) were not related,  $F(1, 168) = .223$ ,  $p > .20$ . Mothers' Male-valued scores did vary significantly with drug use,  $F(4, 168) = 6.347$ ,  $p < .001$ . An examination of that relationship with the Scheffe (1953) multiple comparison method indicated that mothers' Male-valued scores were lower for the regular cannabis group than for the other four groups ( $EW = 5\%$ ), and lower for the regular cannabis and regular polydrug groups taken together than for the remaining three groups ( $EW = 5\%$ ). The difference between the regular cannabis and regular polydrug groups was not significant. Further, there was a significant sex vs. drug group interaction,  $F(4, 168) = 2.597$ ,  $p < .05$ . It was determined,



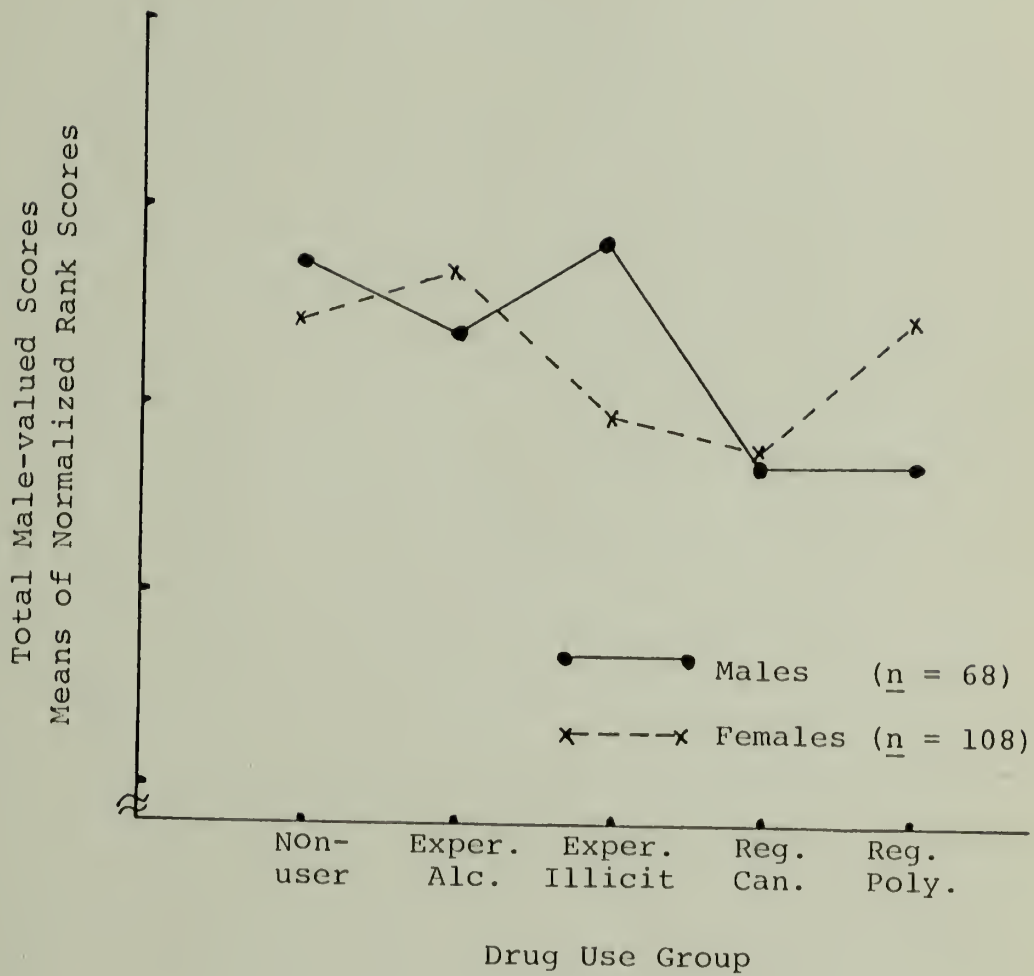


Figure 2. Means of Total Male-Valued scores (in normalized rank scores) from high school subjects as a function of sex and drug use group

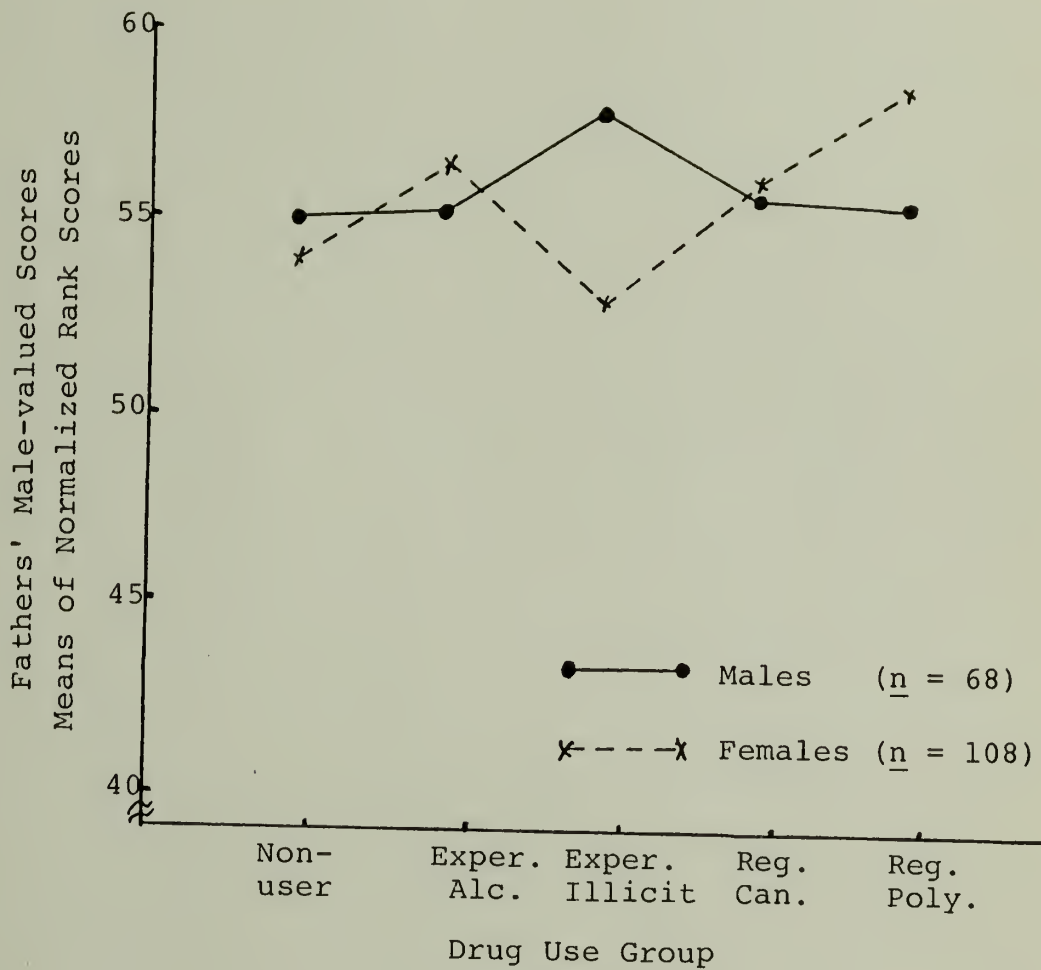


Figure 3. Means of Fathers' Male-valued scores (in normalized rank scores) from high school subjects as a function of sex and drug use group

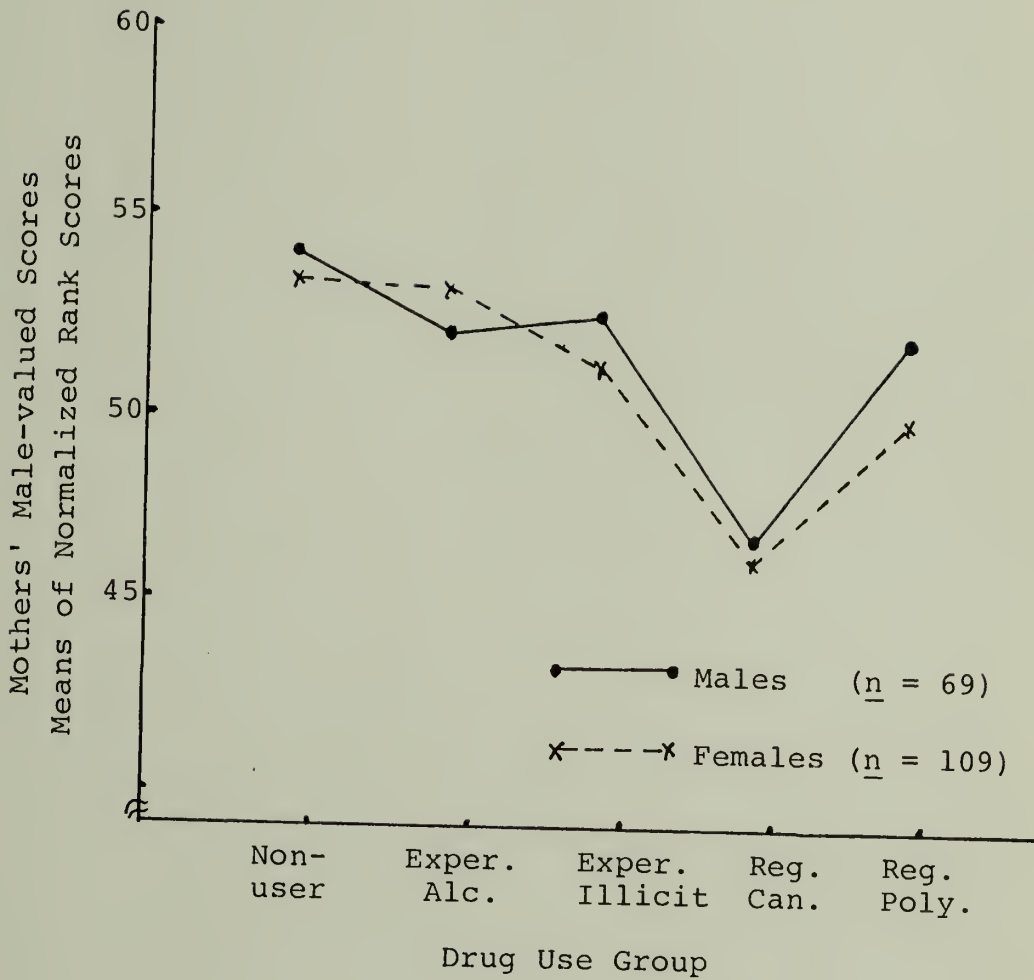


Figure 4. Means of Mother's Male-valued scores (in normalized rank scores) from high school subjects as a function of sex and drug use group

however, (by using analyses of variance for simple effects) that no pairwise contrasts were significant.

Female-valued scores from the ParaQ for fathers and mothers were added to give Total Female-valued scores. (It should be noted that Female-valued scale items are scored in the "masculine" direction, so that a higher score indicates a relative lack of female-valued characteristics. It is not, therefore, very useful to add together the Male-valued and Female-valued scores. The scoring is designed so that a high score would reflect overall stereotypic masculinity. A more interesting score, but one that is not within this measure's design, would total the valued characteristics--both "masculine" and "feminine"--for an individual.) Total Female-valued scores (Figure 5) were not related to sex,  $F(1, 166) = .002, p > .20$ , or drug use,  $F(4, 166) = 1.172, p > .20$ . Again, characteristics of fathers and mothers were investigated separately. Fathers' Female-valued scores (Figure 6) were not related to sex,  $F(1, 167) = .053, p > .20$ , or drug use,  $F(4, 167) = .106, p > .20$ . For mothers, Female-valued scores (Figure 7) did not vary with sex,  $F(1, 168) = .579, p > .20$ , or drug use,  $F(4, 168) = 1.518, p > .20$ . There was a significant sex vs. drug use interaction,  $F(4, 168) = 13.064, p < .001$ . A simple effects analysis of variance indicated that the significance was accounted for by the higher scores for female subjects than males in the regular cannabis group, as

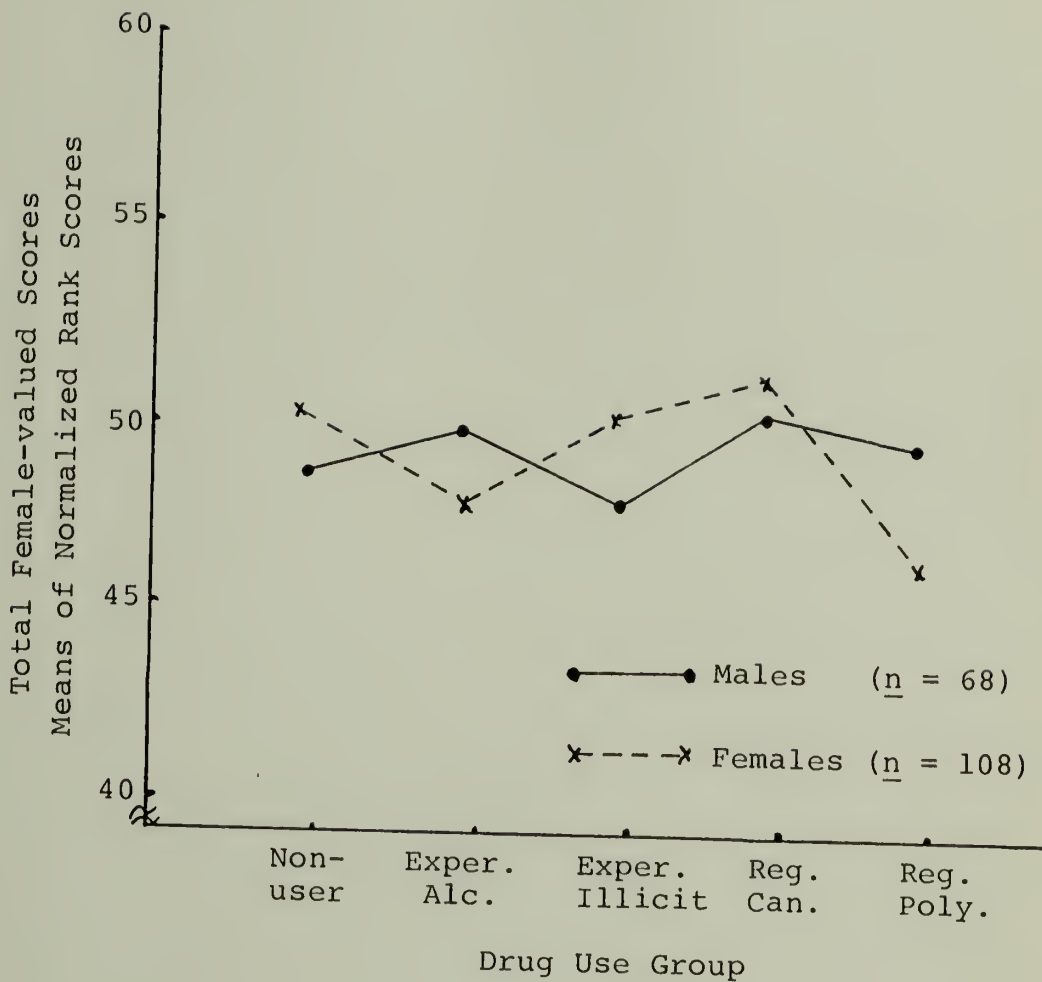


Figure 5. Means of Total Female-Valued scores (in normalized rank scores) from high school subjects as a function of sex and drug use group



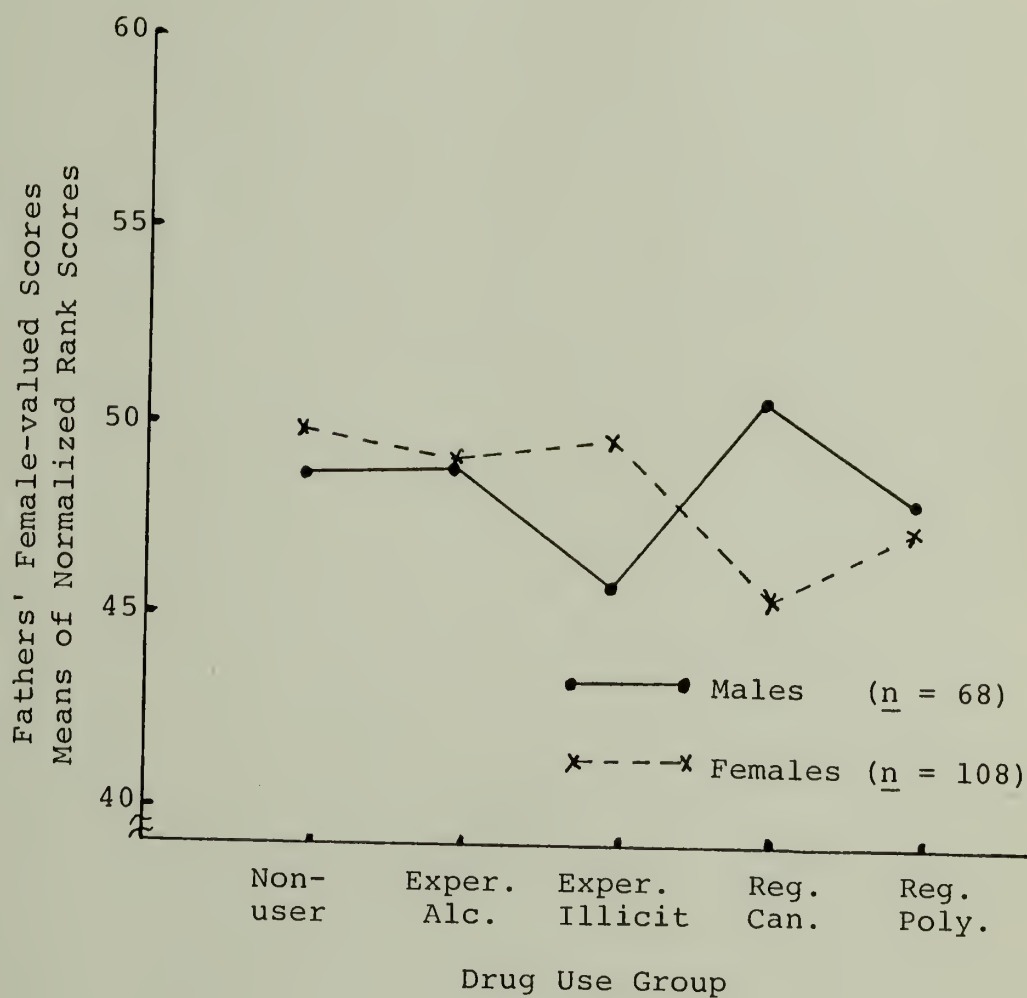


Figure 6. Means of Fathers' Female-valued scores (in normalized rank scores) from high school subjects as a function of sex and drug use group

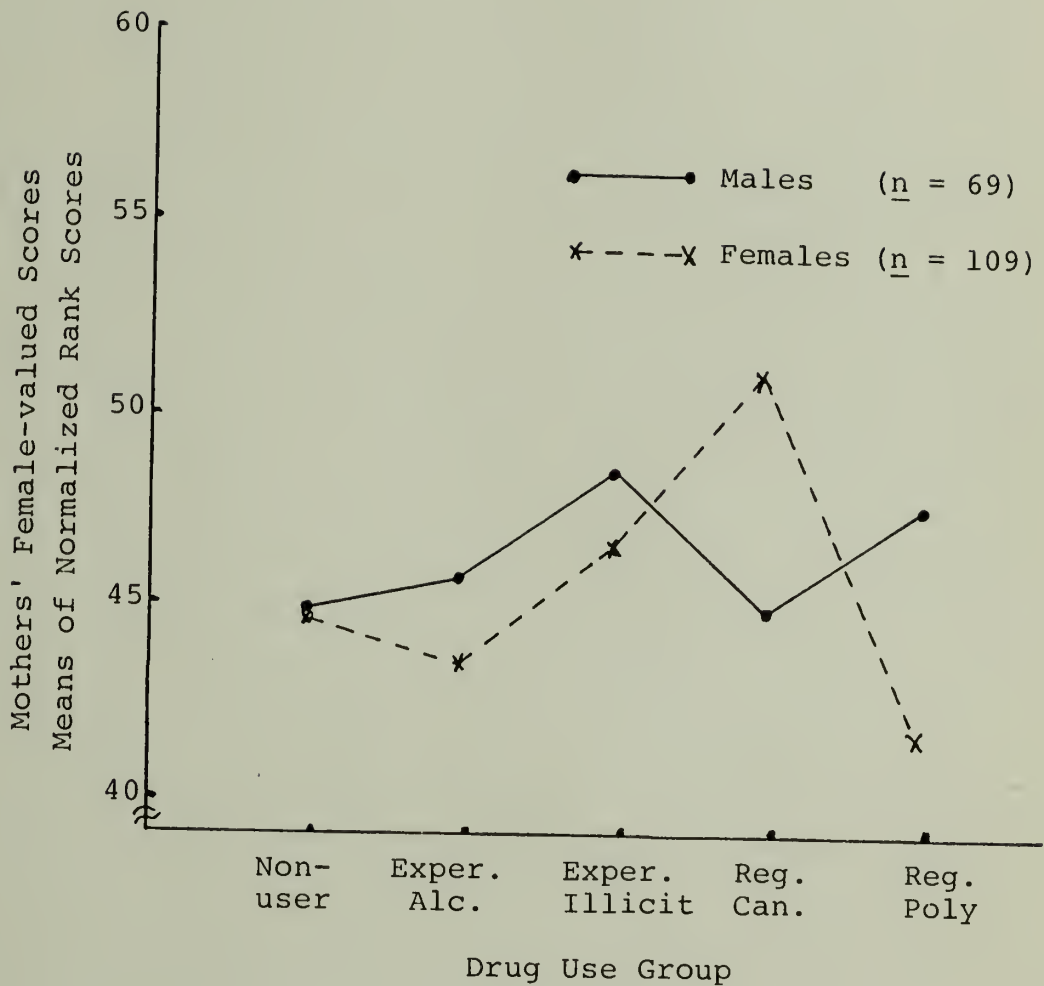


Figure 7. Means of Mothers' Female-valued scores (in normalized rank scores) from high school subjects as a function of sex and drug use group

contrasted to the higher scores for male subjects in the regular polydrug group,  $F(1, 34) = 4.415, p < .05$ . All other pairwise contrasts were not significant.

Briefly then, characteristics attributed to mothers, but not to fathers, related to drug use. The totals of valued characteristics attributed to the parent combination were not related to drug use, and so the hypothesis was not supported overall.

Hypothesis 2: Regular drug users identify with their parents to a lesser degree than do experimental users or non-users.

The sum of the absolute differences between a subject's responses on each item of the Male-valued and Female-valued scales of the PAQ and the description on the same items of that subject's father on the ParAQ provided a measure of similarity to father. (Lower difference scores indicate greater perceived similarity.)

There was a significant relationship between similarity to father and sex,  $F(1, 166) = 14.634, p < .001$ , with males seeing themselves as more like their fathers than did females (Figure 8). Also, perceived similarity was related to drug use,  $F(4, 166) = 2.482, p < .05$ . Scheffe testing indicated no significant pairwise differences between drug use group means. The only significant (EW = 10%) contrast

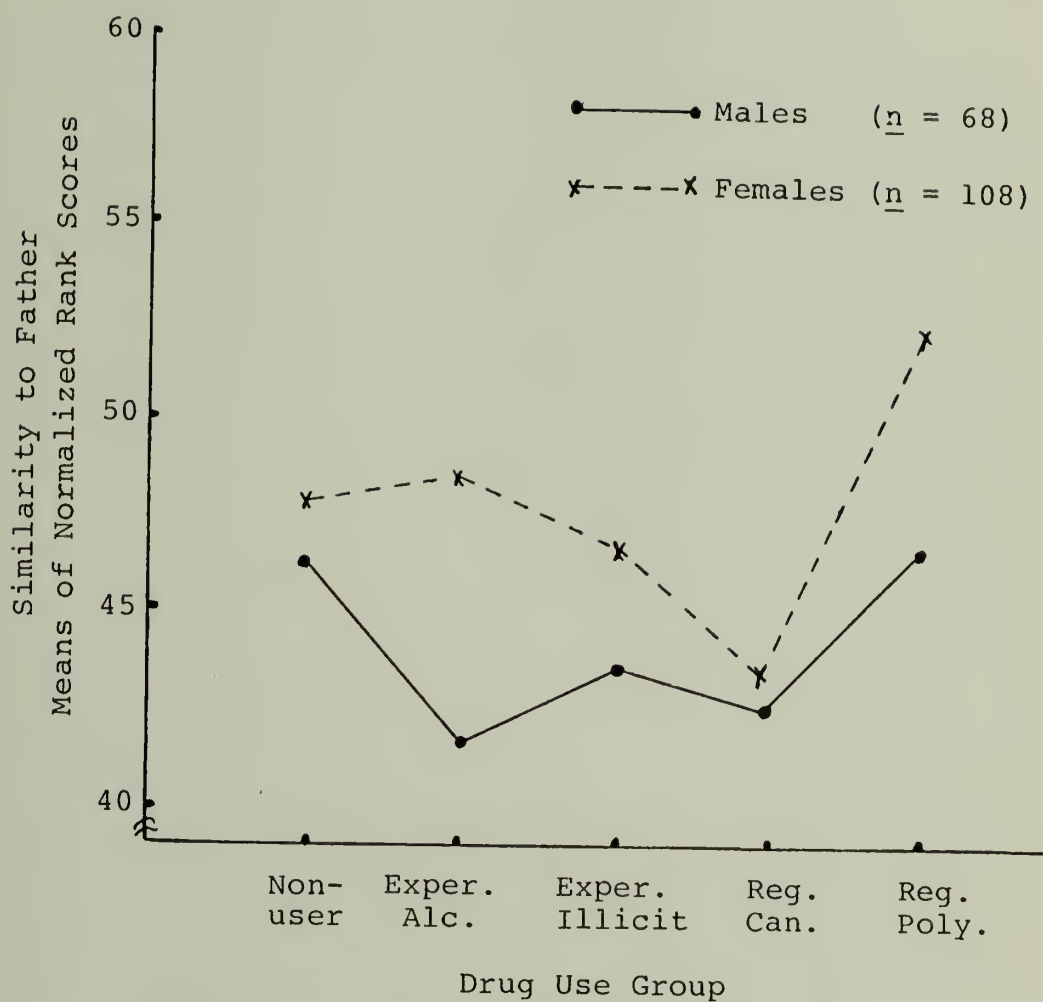


Figure 8. Means of Similarity to Father scores (in normalized rank scores) of high school subjects as a function of sex and drug use group

that could be discovered was a modification of a quadratic form:  $(2 \times \text{nonuser} - 1 \times \text{experimental alcohol} - 1 \times \text{experimental illicit} - 2 \times \text{regular cannabis} + 2 \times \text{regular polydrug}) \neq 0$ . This contrast suggests that nonusers and regular polydrug users, both males and females, see themselves as most dissimilar to their fathers; regular cannabis users, most similar.

The same method of summing differences was used to derive a measure of perceived similarity to mother (Figure 9). This index was not related to sex,  $F(1, 168) = .342$ ,  $p > .20$ . The relationship between perceived similarity to mother and drug use approached significance,  $F(4, 168) = 1.952$ ,  $p < .10$ . Unlike the situation concerning father, the mean for the regular cannabis group was greater than the mean for the subjects in the other drug use groups.

The hypothesis was not clearly supported. There was some evidence that regular polydrug users (of both sexes) identify less with their fathers, but not their mothers.

Hypothesis 3: Regular users perceive themselves as possessing masculine- and feminine-valued characteristics to a lesser degree than do experimental users or nonusers.

The Male-valued score of the PAQ (Figure 10) was strongly related to sex,  $F(1, 168) = 13.898$ ,  $p < .001$ . As expected, males were higher on male-valued characteristics



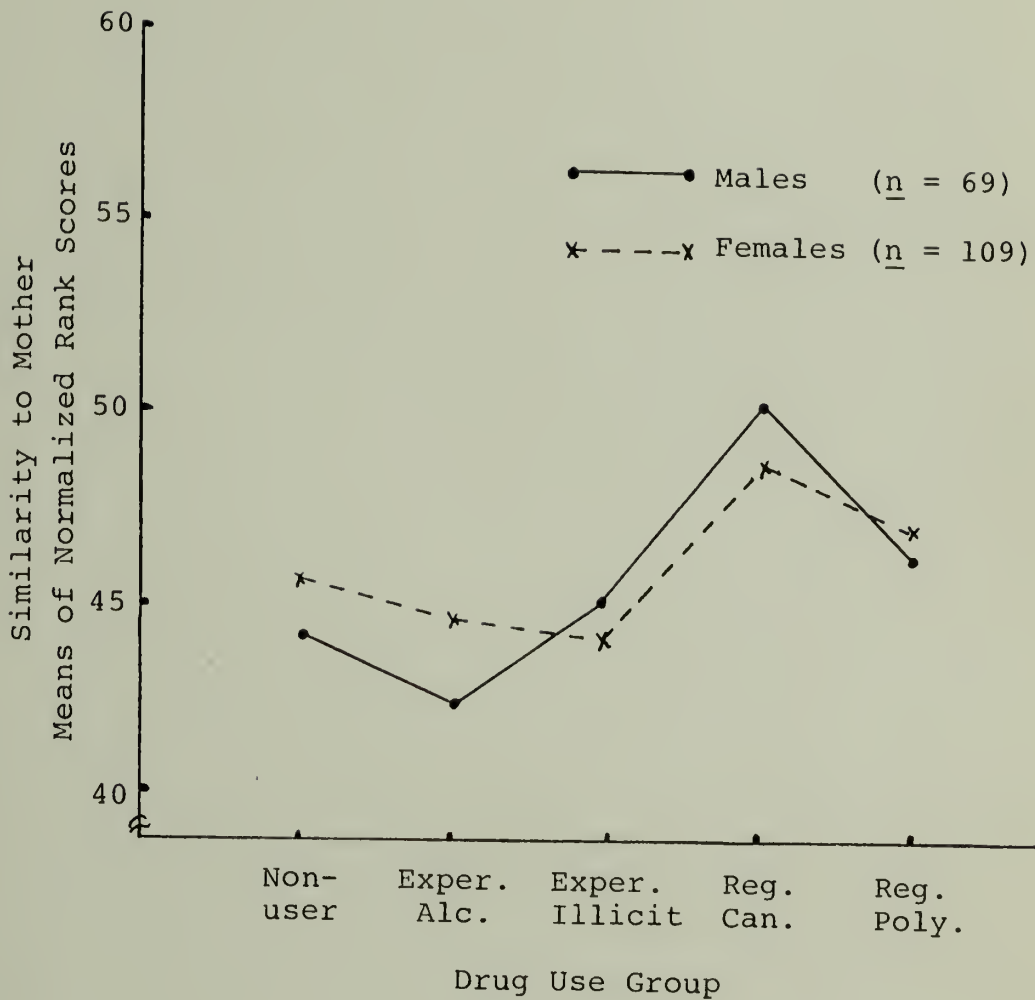


Figure 9. Means of Similarity to Mother scores (in normalized rank scores) of high school subjects as a function of sex and drug use group

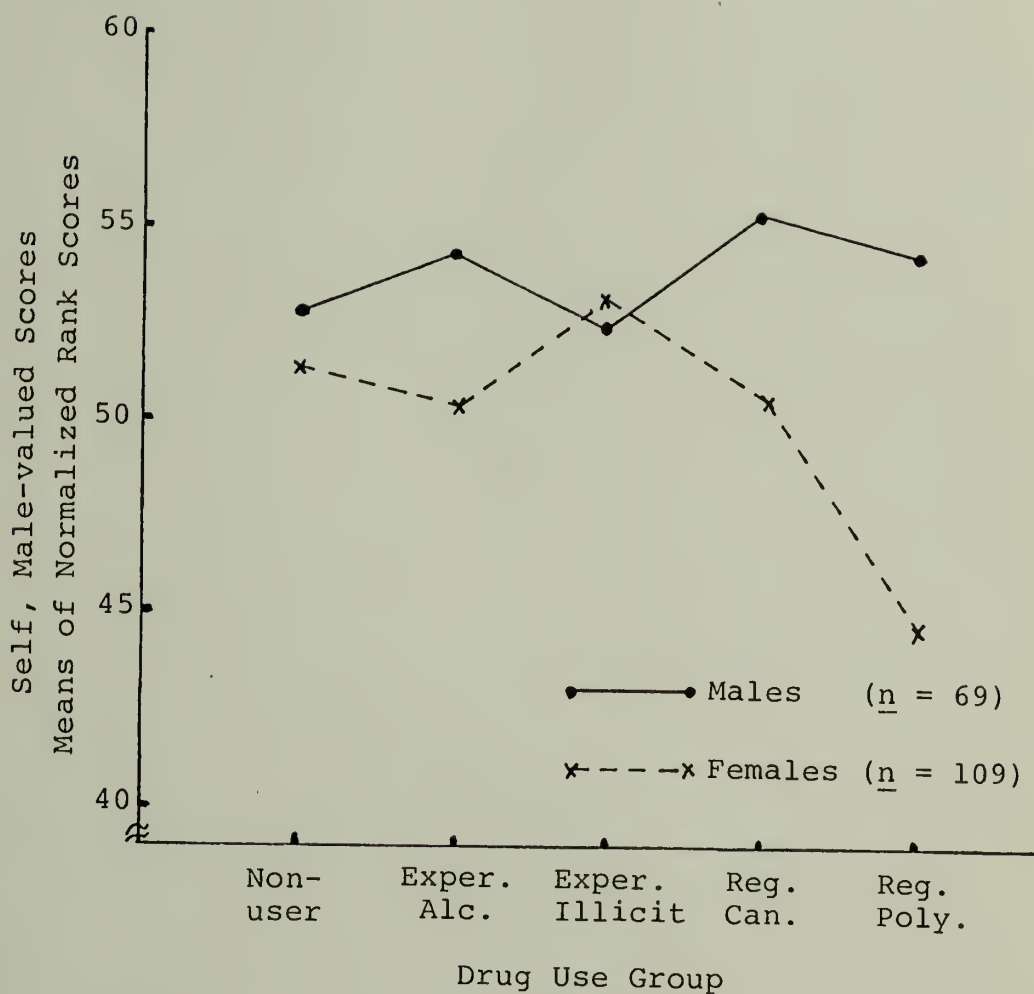


Figure 10. Means of Self, Male-valued scores (in normalized rank scores) of high school subjects as a function of sex and drug use group

than females. The relationship between Male-valued score and drug use approached significance,  $F(4, 168) = 2.370$ ,  $p < .10$ . There was a significant sex vs. drug use interaction,  $F(4, 168) = 3.430$ ,  $p < .01$ . Examining the pairwise contrasts with analyses for simple effects demonstrated that female regular polydrug users scored lower relative to males in their group than did females of the nonuser,  $F(1, 70) = 9.927$ ,  $p < .005$ ; experimental alcohol,  $F(1, 75) = 6.856$ ,  $p < .025$ ; and experimental illicit,  $F(1, 49) = 13.412$ ,  $p < .001$ , groups; but not the regular cannabis group,  $F(1, 34) = 1.516$ ,  $p > .20$ . No other pairwise contrasts were significant.

Sex was related to the Female-valued score (Figure 11) of the PAQ,  $F(1, 168) = 7.490$ ,  $p < .01$ . As expected, females scored lower (more in the feminine direction) than males. There was again a trend-level relationship between the dependent measure and drug use,  $F(4, 168) = 1.972$ ,  $p < .10$ , as well as a significant sex vs. drug use interaction,  $F(4, 168) = 2.724$ ,  $p < .05$ . Simple-effects analyses of variance determined that the relatively lower scores for females than males within the regular polydrug group as contrasted to the experimental illicit group,  $F(1, 49) = 4.409$ ,  $p < .05$ , provided the only significant pairwise difference.

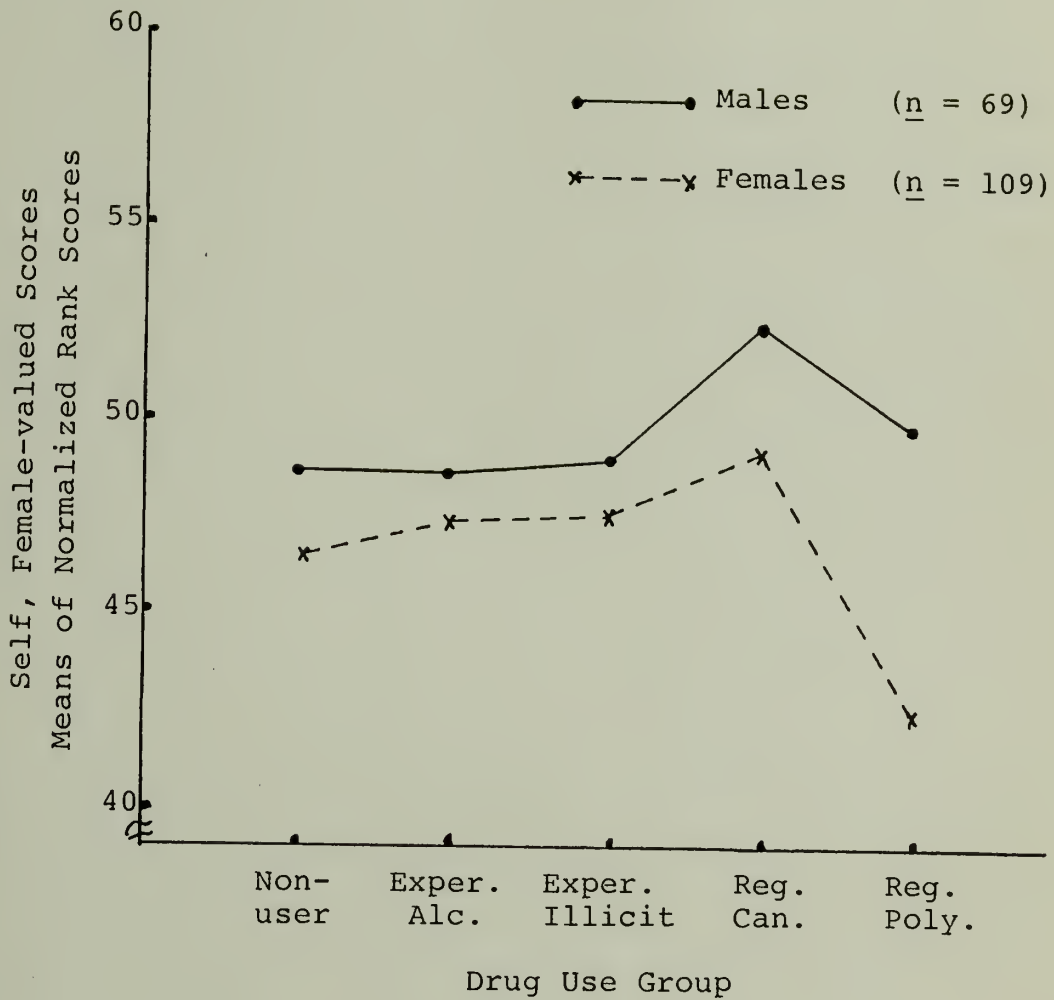


Figure 11. Means of Self, Female-valued scores (in normalized rank scores) of high school subjects as a function of sex and drug use group

The results were similar concerning the Sex-specific scale of the PAQ (Figure 12). The Sex-specific responses (again scored on the masculine direction) were strongly related to sex,  $F(1, 168) = 45.113, p < .001$ , with males predictably scoring higher. No relationship between Sex-specific score and drug use was discovered,  $F(4, 168) = 1.238, p > .20$ . There was a sex vs. drug use interaction,  $F(4, 168) = 3.607, p < .01$ , but in this case no significant pairwise contrasts were found by using analyses of variance for simple effects.

The hypothesis was not supported overall. Regular poly-drug user females did describe themselves as having fewer male-valued characteristics, but more female-valued characteristics, than females in the other drug use groups.

Hypothesis 4: Regular users perceive their parents as more distant from them than do experimental users or nonusers.

The CID scores for each subject for interpersonal distance from father and mother were added to give a Total Parent Distance measure. This measure (Figure 13) was not found to be related to sex,  $F(1, 160) = .0002, p > .20$ , or drug use,  $F(4, 160) = .358, p > .20$ . Distance scores were also analyzed for father (Figure 14) and mother (Figure 15) separately. Perceived distance from father was unrelated to sex,  $F(1, 168) = .077, p > .20$ , or drug use,  $F(4, 168) = 1.757, p > .20$ , of the subject. Similarly, distance from



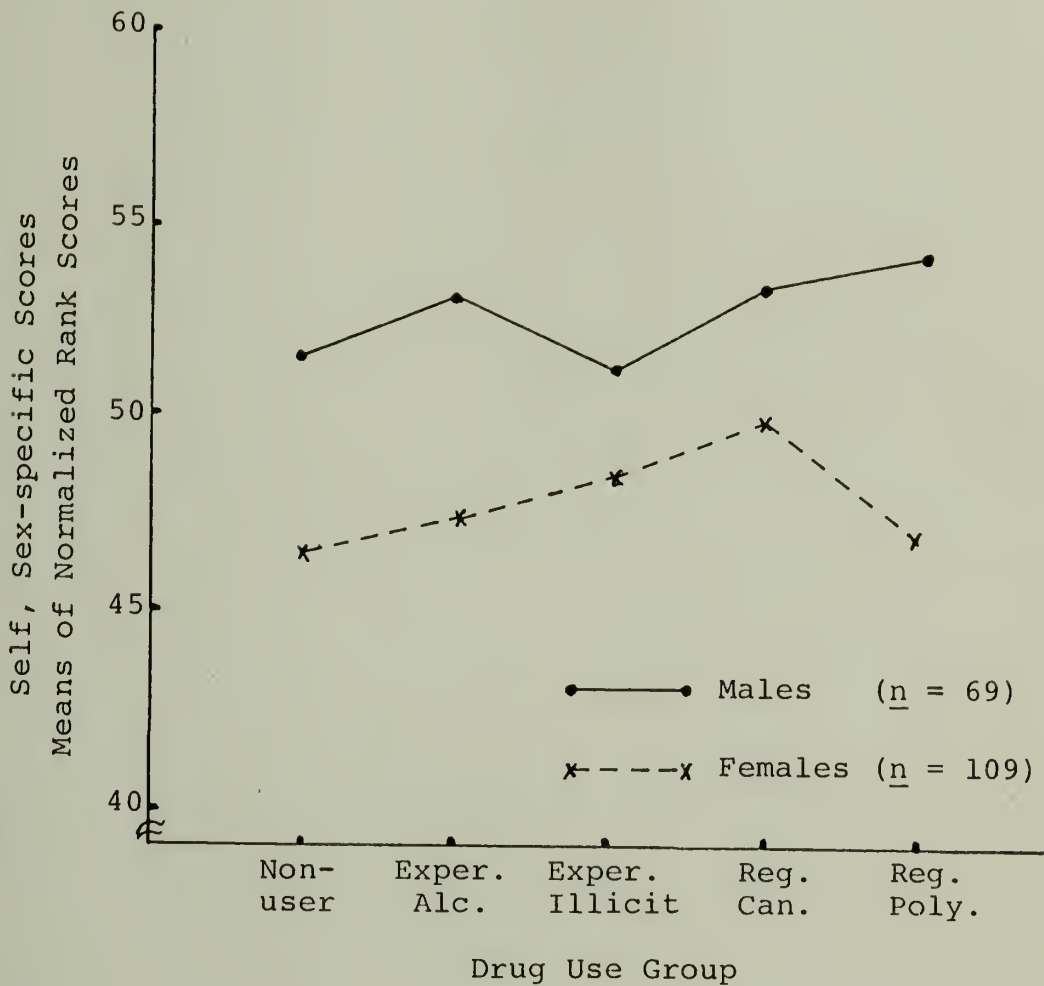


Figure 12. Means of Self, Sex-specific scores (in normalized rank scores) of high school subjects as a function of sex and drug use group

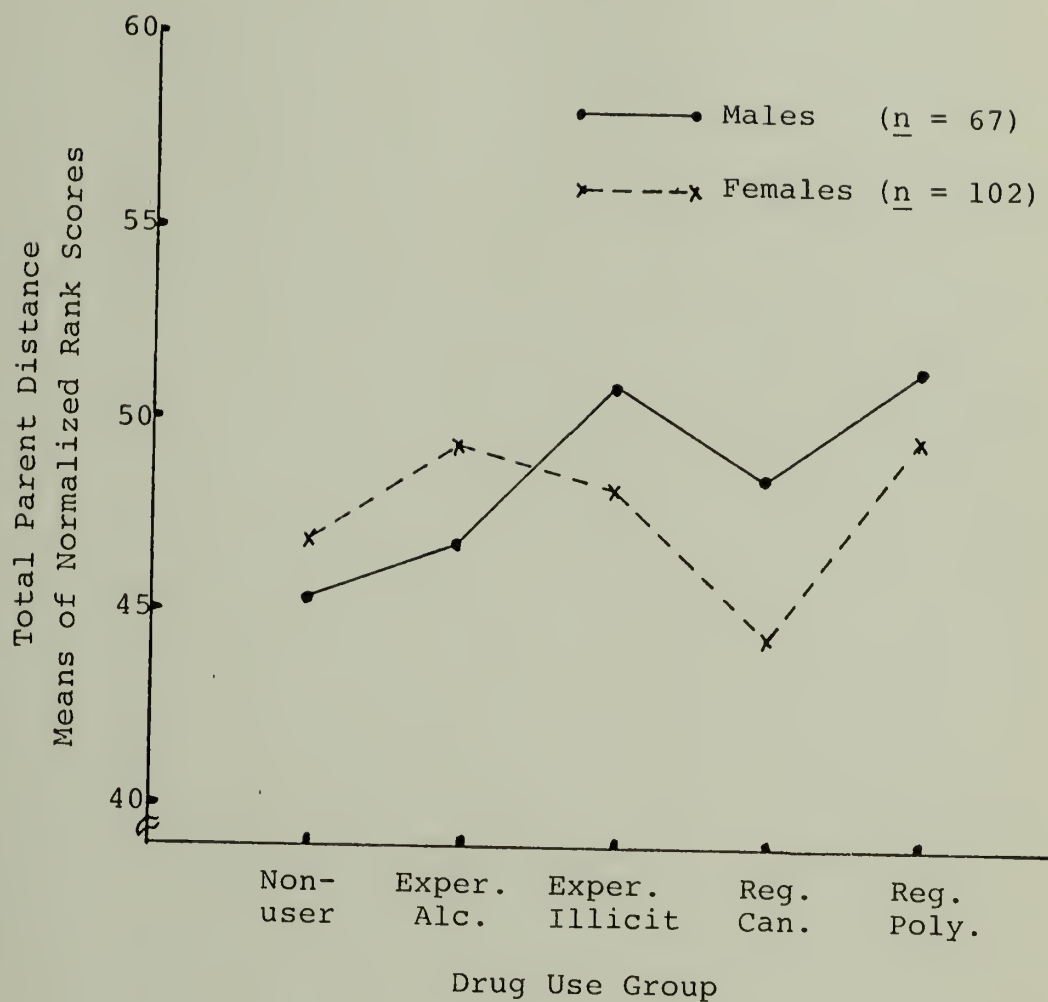


Figure 13. Means of Total Parent Distance measures (in normalized rank scores) of high school subjects as a function of sex and drug use group

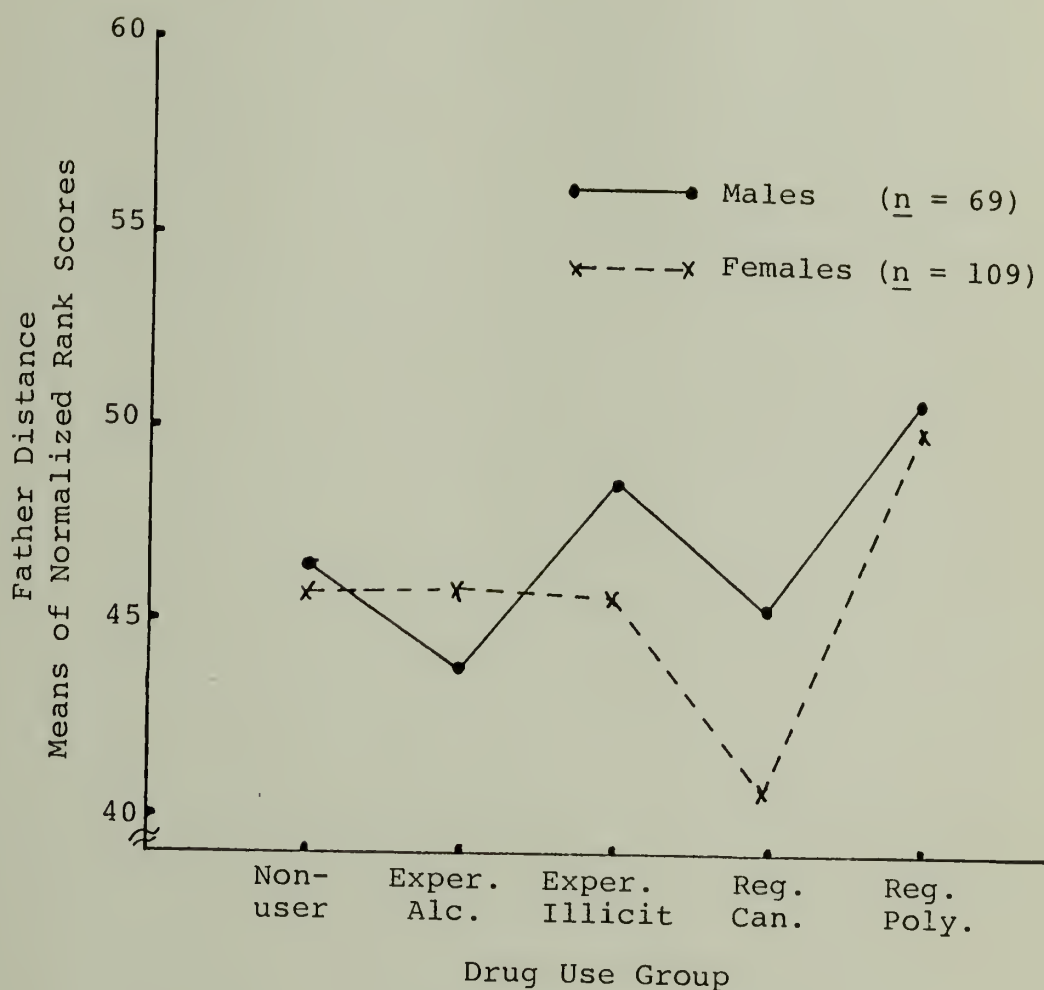


Figure 14. Means of Father Distance measures (in normalized rank scores) of high school subjects as a function of sex and drug use

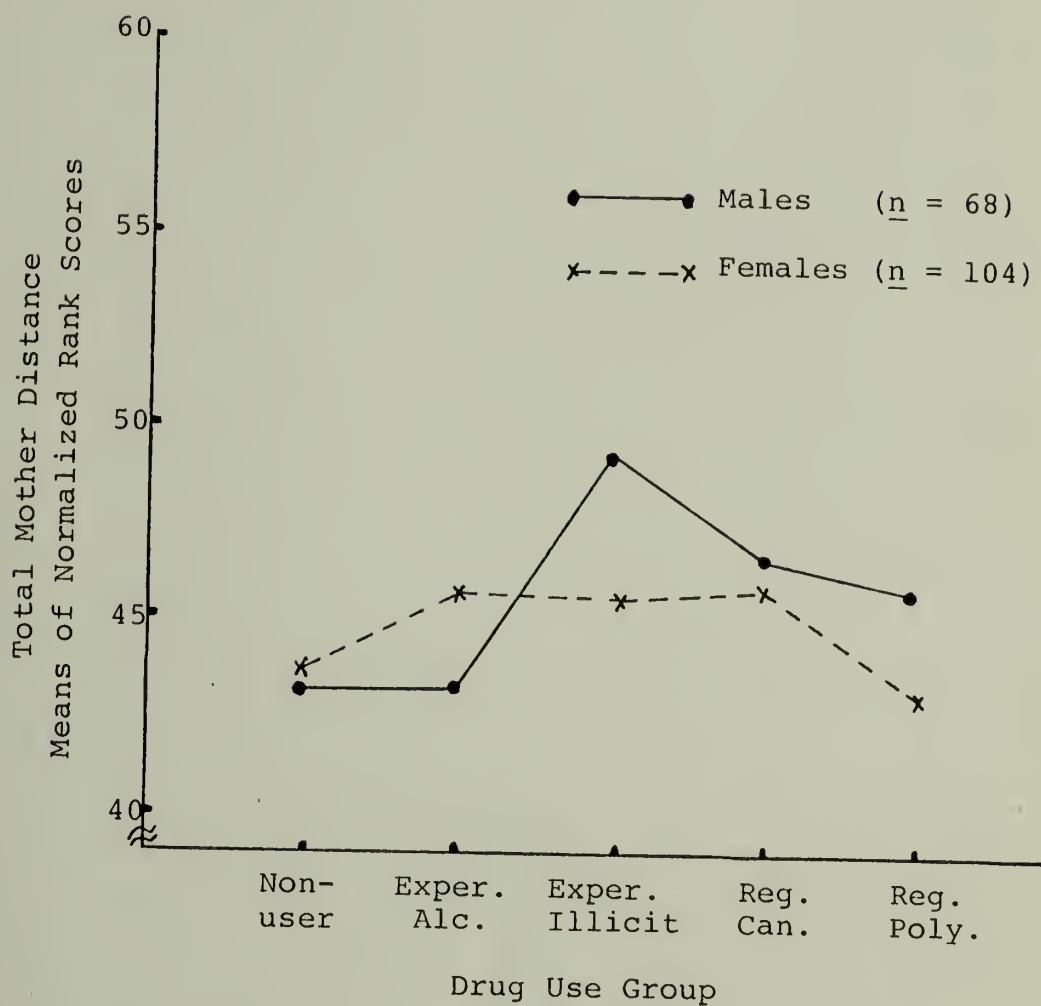


Figure 15. Means of Mother Distance measures. (in normalized rank scores) of high school subjects as a function of sex and drug use group

mother was not related to sex,  $F(1, 162) = .056, p > .20$ , or drug use,  $F(4, 162) = .879, p > .20$ .

A test for the significance of the difference between two proportions (Bruning & Kintz, 1968) indicated that many more subjects placed their fathers further from them than their mothers ( $z = 3.227, p < .001$ ). An index of the relative distancing of father to mother was therefore devised by simply dividing the score for distance from father by the score for distance from mother for each subject. This index (Figure 16) was not found to be related to sex,  $F(1, 162) = .549, p > .20$ . The relationship between the measure and drug use approached significance,  $F(4, 162) = 2.058, p < .10$ . The mean for the father/mother index was largest for the regular polydrug group and smallest for the regular cannabis group.

The hypothesis was not confirmed.

Hypothesis 5: Regular users perceive their peers as closer to themselves than do experimental users or nonusers.

Scores from the CID for distance from a male friend and distance from a female friend were added to provide a measure of Total Peer Distance (Figure 17). This variable was not related to sex,  $F(1, 162) = .617, p > .20$ , or drug use,  $F(4, 162) = 1.140, p > .20$ .

The hypothesis was not supported.



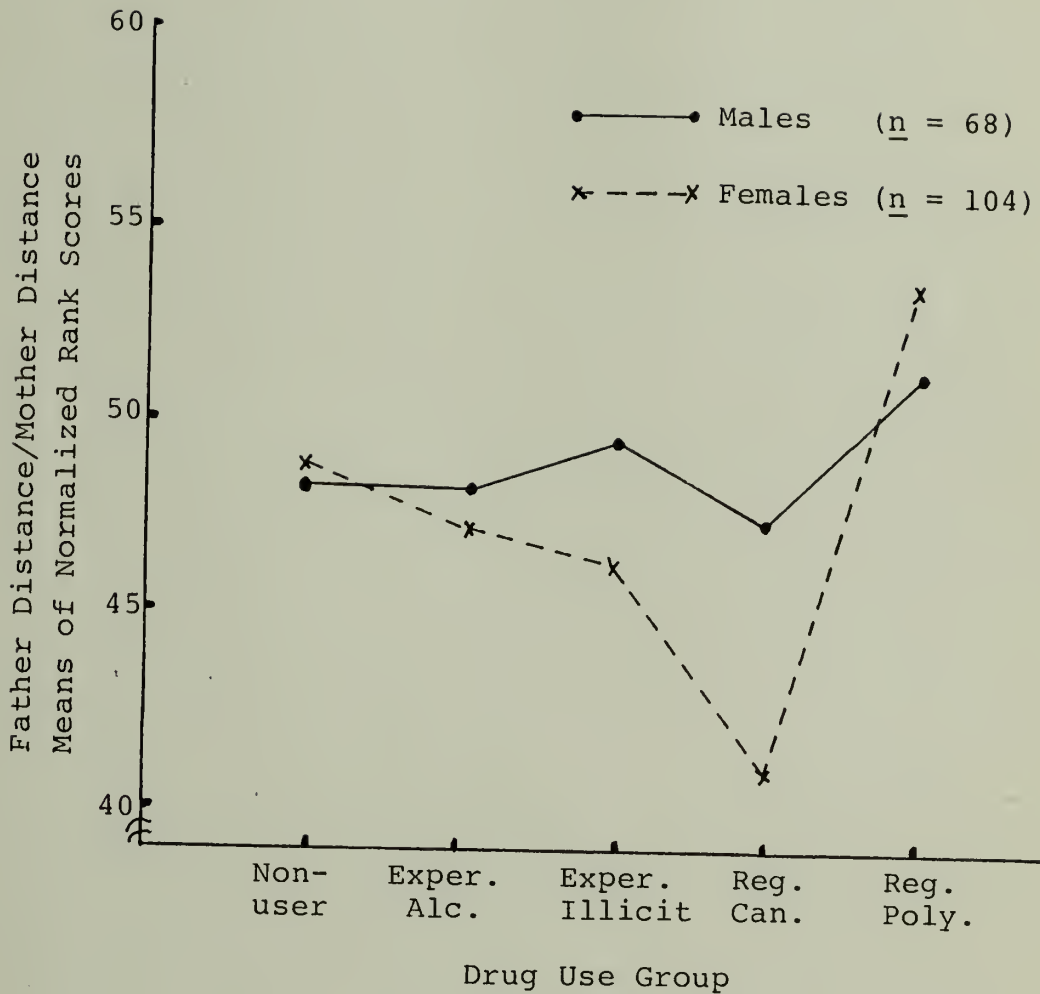


Figure 16. Means of Father/Mother measures (in normalized rank scores) of high school subjects as a function of sex and drug use group

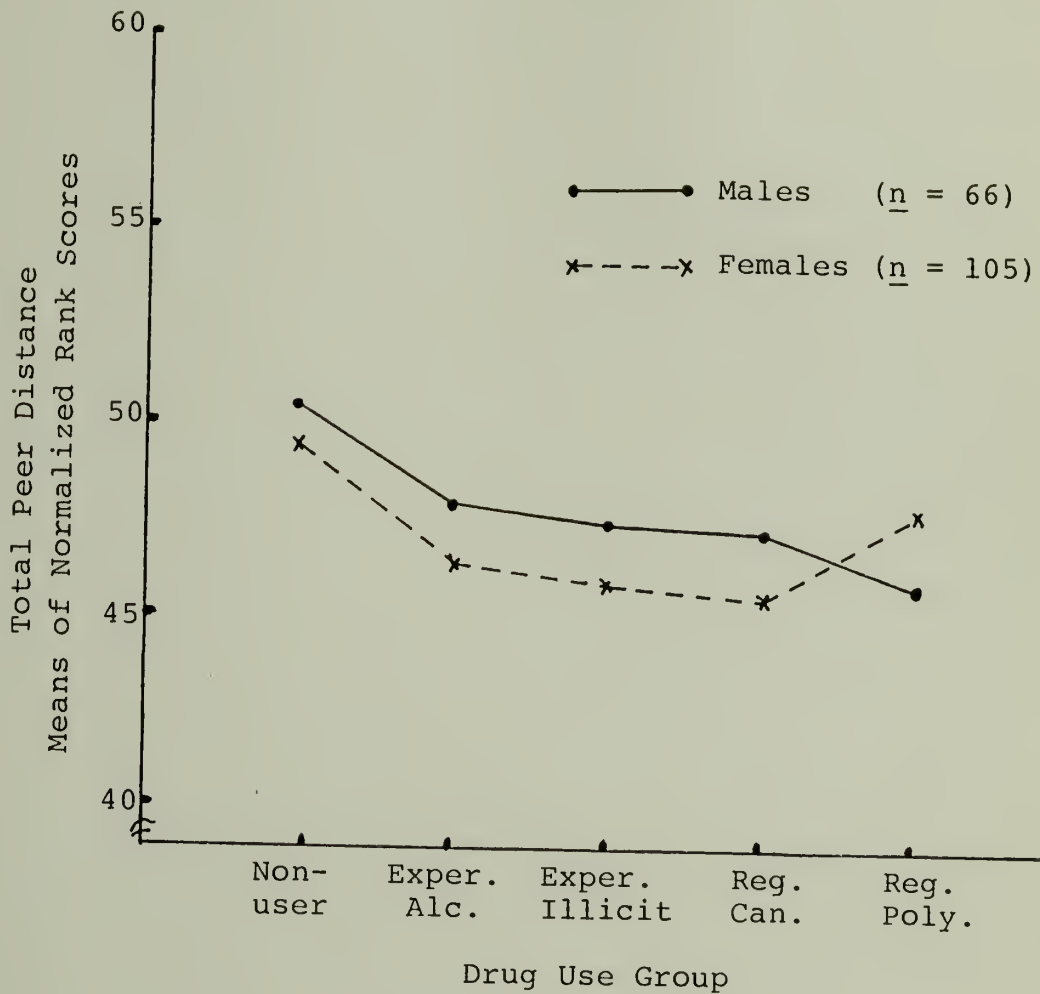


Figure 17. Means of Total Peer Distance measures (in normalized rank scores) of high school subjects as a function of sex and drug use group

Hypothesis 6: Regular users perceive themselves as more externally-controlled than do experimental users or nonusers.

The ANSIE scores for locus of control were used.

(Higher scores indicate greater externality.) Locus of control (Figure 18) was not related to sex,  $F(1, 168) = .067$ ,  $p > .20$ , or drug use  $F(4, 168) = 1.160$ ,  $p > .20$ . There was a significant sex vs. drug use interaction,  $F(4, 168) = 3.423$ ,  $p < .01$ . It was determined by using simple-effects analyses of variance that the pattern of a greater mean for females than males in the regular polydrug group varied from the greater means in the experimental illicit,  $F(1, 50) = 5.706$ ,  $p < .025$ , and regular cannabis,  $F(1, 34) = 7.140$ ,  $p < .025$ , groups.

The hypothesis was not confirmed overall. Female regular polydrug users, but not males, demonstrated the predicted externality. Females in the other illicit use groups were more internal than their male counterparts.

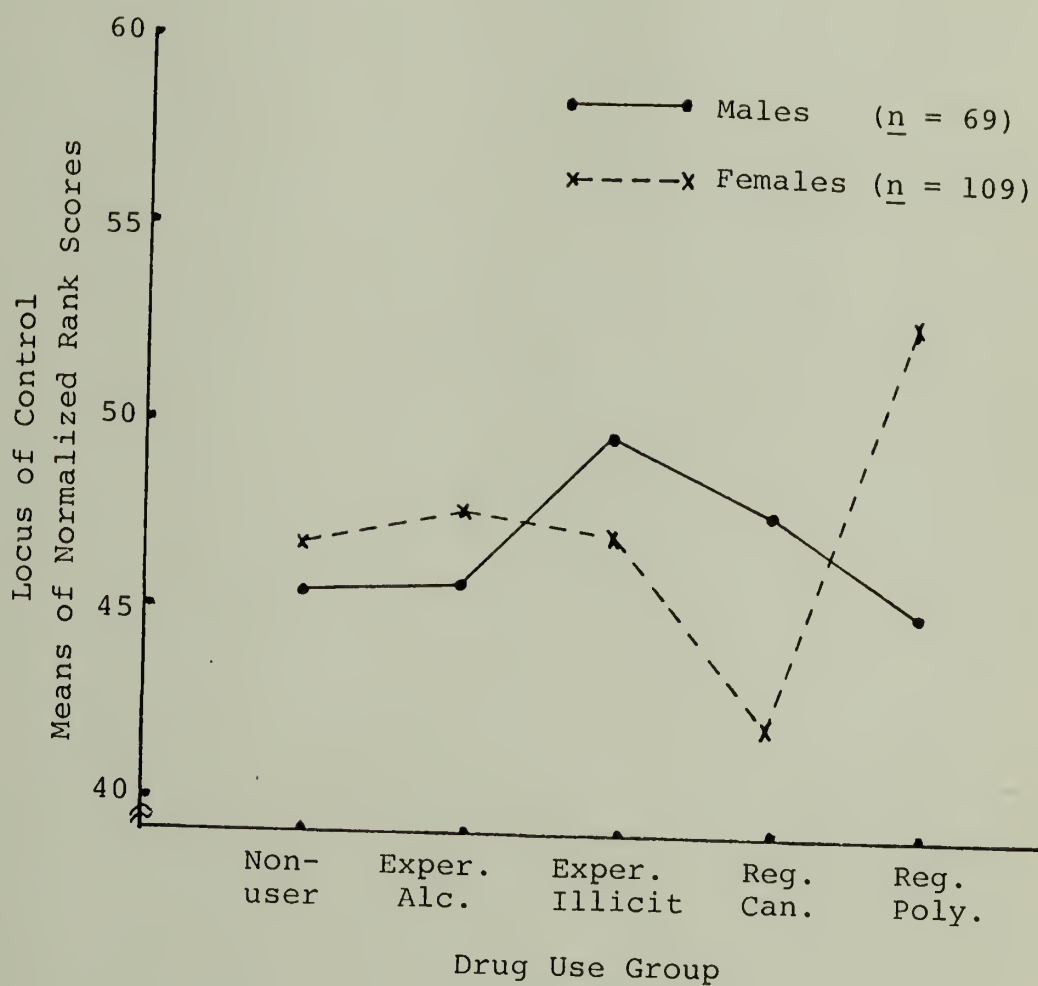


Figure 18. Means of Locus of Control scores (in normalized rank scores) of high school subjects as a function of sex and drug use group

## C H A P T E R    I V

## DISCUSSION

None of the hypotheses regarding the relationship of drug use to parental role modeling, identification with parents, sex identity, distancing of parents and peers, and locus of control received unequivocal support. The production of so few significant effects in proportion to the amount of data collected was disappointing. There were, however, some interesting findings. Several of these concerned the demographic variables. The absence of a relationship between socioeconomic status and drug use contradicts one of the most consistent findings in previous studies (Barr, 1974; Hager et al, 1971; Harris, 1971; Smart & Fejer, 1969; Welpton, 1968), that adolescent drug use is more prevalent in the upper and middle classes. In this study, the purposive utilization of subjects from two high schools in very similar sociocultural environments may well have narrowed the range of socioeconomic status available in the subject pool so much that variance among drug use groups was sharply restricted. Further, Hager et al (1971) have demonstrated that the socioeconomic characteristics of the population of the high school taken as a whole is a stronger correlate of drug use (higher use rate in more affluent schools) than the characteristics of the school's students individually. As was noted, subjects from School A did not differ from those from School B on socioeconomic status. Applying Hager's conclusions, the schools' characteris-



tics were the same, so the students' socioeconomic statuses were relatively unimportant.

The finding of different use patterns for males than females is a common one. Studies examining use of one type of drug, such as psychedelics (Pearlman, 1968) or marijuana (DeFleur & Garrett, 1970) occasionally report no sex difference; but the usual conclusion (supported here) is that males have had more experience with a wider variety of drugs than have females (for example, Hager et al., 1971; Smart & Feher, 1969; Dorhoffer, 1972). The prevalence rates for the use of alcohol, cannabis, and other drugs in this study are well in accord with the rates from prior studies, as summarized by Braucht et al. (1973) and Blumberg (1975). It is Blumberg's contention that prevalence constitutes the most consistent area of agreement in drug use research. A growing concern of mental health professionals had been that adolescents who several years ago may have been poly-drug abusers are now relying more heavily on alcohol as a major drug of choice, either because of the availability of alcohol or because of faddishness. The data from the population surveyed here suggest that alcohol use and abuse nearly always coexist with the use and abuse of other drugs. It appears then, that adolescents may simply be adding alcohol increasingly to the list of desirable recreational drugs rather than substituting it for illicit drugs. It should also be noted here that the primary type of illicit drug

(other than cannabis) reported used by subjects in this population was the hallucinogen group. Although it is not possible to verify from the data available, the drug most subjects referred to was probably phencyclidine (PCP), a veterinary cataleptoid-anesthetic that is usually classified, as it has been here, as an hallucinogen. Forty-seven percent of the clients admitted to a drug abuse program serving a catchment area that includes the two schools surveyed reported phencyclidine as their major drug of choice (Hoobler, Note 5).

No relationship between broken homes and drug use was found here. Most of the literature regarding that factor has been concerned with alcohol and narcotic dependence, both of which have tended to be phenomena more often associated with lower class subjects (Braucht et al., 1973), where broken homes are more common. Since ploydrug use has been related to middle and upper class status, the discrepancy may be interpreted simply on a sociocultural basis.

Some results from the major analyses are also interesting. The ParAQ results suggest that mother's characteristics are associated with drug misuse. The mothers of drug misusers (regular cannabis and regular ploydrug), according to these findings, are perceived as packing the same quantity of male-valued traits as the mothers of the other subjects; that is, they are seen as less independent and less assertive. In addition, female regular cannabis users, unlike female subjects in the other groups, perceived their mothers

as having fewer female-valued characteristics than their fathers. This finding apparently lacks precedent in the literature. The mothers of male addicts have been typically considered to be more "in control" of the household and therefore presumably more assertive than their husbands (Schwartzman, 1975; Larner & Tefferteller, 1964; Chien, Gerard, Lee, & Rosenfield, 1964; Nyswander, 1956; Mason, 1958). A possible explanation is related to household discipline and concern. Streit, Halsted, and Pascale (1974) found that adolescent drug users perceived their parents as hostile to them, while at the same time willing to allow them considerable autonomy. A less assertive, less compassionate mother has trouble both consistently enforcing disciplinary standards and providing a model of female-valued characteristics. She may be a mother who is easily manipulated, frustrated, and ignored, caricatured by the "wait until your father gets home" stereotype. It may be this sort of mother who tends to have children who misuse drugs.

The significant effect relating perceived similarity to father to drug misuse is difficult to interpret. That perceived similarity was greatest for regular cannabis users and less for regular polydrug users does suggest that cannabis use has different implications than polydrug use. Since marijuana use is becoming a more accepted practice, increasingly fewer adolescents may experience as much

discord with their parents resulting from cannabis use as from polydrug use. Marijuana use may be becoming differentiated in the public's mind from "drug use."

The sex vs. drug use interactions from the PAQ's Male-valued, Female-valued, and Sex-specific scales have a unifying factor. In each case the mean values are approximately the same over drug use groups for the male subjects, but for the females the scores for the regular polydrug groups diverge. Male adolescent drug misusers, then, may be no different in sexual identity from their non-misusing peers. Female regular polydrug users (and regular cannabis users to a lesser extent), however, have fewer Male-valued traits and more Female-valued traits than non-misusers, both males and females. There are some concurring results in the literature. There have been indications that femininity in females is associated with poorer psychological adjustment (Cosentino & Heilbrun, 1964; Gray, 1959; Heilbrun, 1960, 1962, 1968). (Similarly, Mussen found in a 1962 study that males with high masculine interests during adolescence became adults who lack self-confidence and leadership ability relative to males who were less masculine during adolescence.) The female addicts studied by Miller, Sensening, Stocker, and Campbell (1973) subscribed to the traditional sex-role stereotype of interpersonal and intrapersonal sensitivity as opposed to achievement orientation. Baldinger, Capel, Goldsmith, and Stewart (1972) found heroin addict females to be conventional in



their values, although female marijuana users were not. The lifestyle of a female polydrug user in many ways epitomizes a subservient role system, doubtless because drug use remains a less acceptable, "acting-out" behavior for females more than for males. The drug supply networks are male dominated. Female polydrug users report that they seldom pay for drugs, but rather receive them in exchange for "staying with" male users. Most female users who use a needle typically do not self-inject, but receive injections from males, according to Howard and Borges (1970). For females who do purchase drugs, prostitution is twice as common a money-raising activity as selling drugs, the predominant male venture (Chamber, Hensley, & Moldestad, 1970). This description of the female misuser apparently conflicts with Kerr's contention that females who become polydrug abusers perceive themselves as more aggressive than other females. It may be that these females suppress stereotypically-male feelings and effect traditional values in an attempt to become more acceptable. A more complex explanation comes from Heilburn (1968). He reports that for poorly adjusted, masculine females, "masculinity" appears to be manifested in social alienation (high autonomy, low nurturance); better adjusted masculine females show also a high need for succorance (emotional support from others).

. More evidence for the uniqueness of the female drug misuser comes from the ANSIE data. Regular female polydrug users are more externally oriented than their male counterparts;

the reverse is true for experimental illicit and regular cannabis users. That female group is in accord with the hypothesis of external locus of control when the other illicit drug use groups, both male and female, are not. Logically, a female who subscribes to the stereotypic feminine role values also sees outside influences as especially strong determinants of their behavior. These results indicate that assertiveness training would be an especially useful technique in treating female drug abusers.

All the significant main effects related to sex were in the predictable direction. Males showed more male-valued traits; females, more female-valued traits. Sex specific characteristics were more endorsed by the appropriate sex. Male subjects more than females saw themselves as more similar to their fathers. There was no complementary finding for females and their mothers.

In summary, the questionnaire responses of the female regular users differentiated them from the other subjects. In their endorsement of a traditional female sex role they demonstrated the lack of balance between masculinity and femininity that Bem (1974, 1975) calls androgyny, a psychologically healthy characteristic. They also endorsed a more external locus of control than the other groups, again suggesting poorer psychological adjustment. Data from the female users thus offered support to some of the hypotheses, but none to the part of the theory that predicted a relation-



ship between identification with parents and sexual identity.

When a study produces so few significant results overall, methodological factors deserve careful scrutiny. Of the numerous shortcomings affecting adolescent drug use literature discussed earlier, one methodological issue plagued this study: the volunteer population problem. In this case, not only were the subjects volunteers, so were, in a practical sense, the persons (home room teachers) directly responsible for administering the questionnaire package. There was no way, then, for the experimenter to encourage the subjects to participate in the research or, in fact, to effectively prevent them from being discouraged by certain of the teachers. Principals at both schools initially expressed reluctance to permit the research. (A third school contacted was not surveyed; the principal there reported that his teachers had decided against participation.) It was unclear what particular aspect, if any, of the voluntary participation was most detrimental to the response rate. The principal at School B, to illustrate, gave considerable verbal support to the research. The principal at School A told the experimenter that he was participating only because the superintendent of schools had advised him to do so. Despite that difference, the response rate at School A was higher than at School B.

. The length of the questionnaire package (16 pages) must be assumed to have been a contributor to the poor response rate. Less than half of the questionnaires distributed (ap-

proximately 450) were returned. A shorter questionnaire very conceivably would have been completed more frequently by its possessors. The inclusion of the drug use survey in the package may have deterred some subjects. Another potential negative factor was the reliance upon the students themselves to carry home the parental consent letter, rather than the use of the mails for that purpose. In general, then, the response rate problem seems tied with the voluntary participation issue, which was exacerbated in this study by (a) the use of volunteer questionnaire administrators (b) the stipulation that no class time be devoted to the research, and (c) the substantial length of the questionnaire.

The response rate problem led directly to the difficulties with heterogeneity of variance (and/or non-normality). The CID data were especially susceptible. In completing this instrument's tasks, the respondent makes some very subjective decisions. The phrase "begin to feel uncomfortable" must be interpreted, given no situational cues (such as location of the room or the mood of the stimulus person) in the standard instructions; the size of the imaginary room is not defined, so that a 10 meter distance response may correlate with 1 meter for one subject and 15 meters for another. In this study, the small frequencies in some of the cells produced so great a heterogeneity problem as to make the instrument virtually useless. Bartlett's tests indicated significant heterogeneity for four of the five data sets. Data from the

other instruments appeared less affected.

The voluntary participation design introduces an additional obvious problem: the sample, being self-selected, is inherently biased. The differential response rates for males and females plainly reflects the non-randomness of the self-selection. The subjects who completed the questionnaire package might be distinguished from their classmates by their (a) high achievement motivation, (b) introspective nature, or (c) respect for authority. Which motivators operated for which subjects is unknown. The voluntary participation probably created an underestimation of drug use prevalence in the population, but in doing so likely boosted the accuracy of the drug use questionnaire data. (Drug users afraid to report their use did not need to distort that use; they could merely fail to return the questionnaire.) Nonetheless, results from any biased sample, this one included, are open to criticism on that basis alone.

The aim of this study was to support related points in one etiological theory concerning drug misuse, and that purpose was not clearly accomplished. Regardless of the methodological problems here, there are some theoretical implications of the failures to confirm the hypotheses. First, family variables have been previously shown to be weak, but persistent, predictors of drug use (Schultz & Wilson, 1973). The results here are in line with that conclusion. In addition, drug use prevalence can change substantially within a

period of a few years; and there are signs that adolescent polydrug use increased yearly during the early 1970's (Blumberg, 1975). Drug abuse is no longer a problem mostly of low socioeconomic groups, or of dropouts from mainstream society. It does not frighten or concern parents as it once did. Therefore, it likely is not as intertwined with intra- and interpersonal pathology, both predisposing and resultant, as was once the case. Since more adolescents have become drug misusers, the differences between misusers and non-misusers have lessened considerably. It may well be that regular drug use remains a more deviant phenomenon for females than males, as reflected in the responses of the female regular users in this study. As both drug use and androgyny become more socially acceptable (presuming apparent trends in that direction continue), female regular users should become less differentiated from other adolescents, male and female.

What is needed from future research is help in understanding what factors are involved in the progression of some individuals from first use to misuse to abuse to dependence. As Borsuch and Butler (1976) have noted, there are several paths leading to initial nonmedical use. But when the proportion of the adolescent population that has misused drugs consistently approaches one-half, as is now the case for marijuana, looking for the predictors of experimental drug use becomes practically meaningless. More studies, also, are required aimed not at discerning a progression up

a hierarchy of drugs, for drugs are probably perceived more in age-specific than length-of-use-specific classes (Hamburg et al., 1975), but instead at the hierarchy of levels of drug use. These studies should be longitudinal examinations of a given group of subjects. Research that samples at one time subjects of various ages has become less valued because of the rapidly-changing attitudes toward drug use; a 15-year-old drug user is a part of a subculture which views drug use differently than does the subculture in which a 20-year-old subject's use developed. Longitudinal research could make the very complicated interactions between the individual and the environment more understandable.



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Appendix A: Letter to Parents<sup>a</sup>

*The Commonwealth of Massachusetts*  
*University of Massachusetts*  
*Amherst 01002*

DEPARTMENT OF PSYCHOLOGY

Dear Parent:

A research project will be conducted by the undersigned within the next few weeks under the sponsorship of the University of Massachusetts Psychology Department involving a large number of high school students. The project, of course, has the approval of the Gwinnett County Schools. The students will be asked to complete a questionnaire which asks for opinions about themselves, their parents, their friends, and about their use of drugs. Very obviously, these are sensitive topics. It is important that you understand that special precautions are being taken to be sure that the results are kept completely confidential. Students will be told not to put their names on the questionnaires. Only the researcher, and no one from the schools, will see the questionnaire answers. The researcher will not be looking through school files, talking with teachers about students, or otherwise getting information aside from the questionnaire. Students will in no way be singled out to the schools as a result of the answers they give.

The Gwinnett County Schools rightfully allows a parent or guardian to refuse to allow their child to participate in any research project. Please sign this letter below and return it to the school to indicate your consent.

If you have any questions or concerns about this research, please feel free to call the undersigned during office hours (8 A.M.-5 P.M.) at 963-0339 (Lawrenceville).

Many thanks in advance for your help.

Sincerely,

Raymond L. Hoobler, M.S.

---

I hereby refuse consent for \_\_\_\_\_  
 (student's name)

to participate in the research project described above.

Signed \_\_\_\_\_  
 (parent or guardian)

Date \_\_\_\_\_

<sup>a</sup> Reduced here from Elite type to fit margins.

Appendix B: Questionnaire Package<sup>a</sup>

This study is trying to learn some things about how Gwinnett County students feel about themselves, their parents, and drugs.

MANY OF THESE QUESTIONS ARE OF A PERSONAL NATURE. DO NOT PUT YOUR NAME ON THIS QUESTIONNAIRE.

Since it is important that you feel free to answer every question, it is necessary that you understand that your answers will be kept entirely confidential. Only the experimenter (and no one from the school) has access to the questionnaires.

Please work as quickly as possible. First answers are usually best. Do not spend too much time on any one part of the questionnaire, but be sure to answer all of the items.

Thank you for your help.

<sup>a</sup> Reduced here from Elite type to fit margins.

## Demographic Questionnaire

Family Information Sheet

1. Date of birth: Year \_\_\_\_; Month \_\_\_\_; Day \_\_\_\_
2. Sex: M F (Circle)
3. For each of the three age periods listed, indicate (by checking) the adults with whom you lived (all or most of the time) who were responsible for your upbringing:
 

	Birth-5 yrs	6-10 yrs	11 yrs on
a) Mother & father (natural or adoptive)	_____	_____	_____
b) Mother only	_____	_____	_____
c) Father only	_____	_____	_____
d) Mother & stepfather	_____	_____	_____
e) Father & stepmother	_____	_____	_____
f) Other (specify) _____	_____	_____	_____
4. Over the past five years, what was your parents' (or other adult guardians' with whom you live) employment?
 

	Mother	Father
No paid employment	_____	_____
Part-time employment	_____	_____
Full-time employment	_____	_____

Major job or occupation \_\_\_\_\_
5. How much education have your parents (or other adult guardians with whom you live) completed?
 

	Mother	Father
Grade school	_____	_____
Some high school	_____	_____
High school graduate	_____	_____
Training beyond high school	_____	_____
Some college	_____	_____
College graduate	_____	_____
Postgraduate work	_____	_____
6. What is your family's religious affiliation?  
 Catholic \_\_\_\_; Greek Orthodox \_\_\_\_; Protestant \_\_\_\_; Jewish \_\_\_\_;  
 None \_\_\_\_; Other \_\_\_\_ (specify) \_\_\_\_\_
7. To what ethnic or racial group do you belong? \_\_\_\_\_
8. List below the brothers and sisters (include step- and foster-brothers and sisters) with whom you grew up. List them from oldest to youngest, specifying their sex and current age. Put yourself in the list where you belong, writing "SELF" and your age.
 

Sex (M or F)	Age	Sex (M or F)	Age
1. _____	_____	7. _____	_____
2. _____	_____	8. _____	_____
3. _____	_____	9. _____	_____
4. _____	_____	10. _____	_____
5. _____	_____	11. _____	_____
6. _____	_____	12. _____	_____



10. Not at all competitive                      Very competitive  
A...B...C...D...E
11. Very home oriented                      Very worldly  
A...B...C...D...E
12. Not at all kind                      Very kind  
A...B...C...D...E
13. Indifferent to others' approval                      Highly needful of others' approval  
A...B...C...D...E
14. Feelings not easily hurt                      Feelings easily hurt  
A...B...C...D...E
15. Not at all aware of feelings of others                      Very aware of feelings of others  
A...B...C...D...E
16. Can make decisions easily                      Has difficulty making decisions  
A...B...C...D...E
17. Gives up very easily                      Never gives up easily  
A...B...C...D...E
18. Never cries                      Cries very easily  
A...B...C...D...E
19. Not at all self-confident                      Very self-confident  
A...B...C...D...E
20. Feels very inferior                      Feels very superior  
A...B...C...D...E
21. Not at all understanding of others                      Very understanding of others  
A...B...C...D...E
22. Very cold in relations with others                      Very warm in relations with others  
A...B...C...D...E
23. Very little need for security                      Very strong need for security  
A...B...C...D...E
24. Goes to pieces under pressure                      Stands up well under pressure  
A...B...C...D...E

## Drug Use Questionnaire

Describe how frequently within the past year you have used each of the following types of drugs. Circle the letter after each item number that best corresponds to the frequency.

- A...Not at all  
B...Once a month or less often  
C...Once a week or less often  
D...Several times a week  
E...Daily or several times a day

- |    |   |   |   |   |   |  |
|----|---|---|---|---|---|--|
| 1. | A | B | C | D | E | Alcohol (beer, wine, liquor)   |
| 2. | A | B | C | D | E | Amphetamines or other stimulants (speed, crystal, Preludin, etc.)                  |
| 3. | A | B | C | D | E | Barbiturates or other sedatives (downers, reds, Valium, Quaalude, etc.)            |
| 4. | A | B | C | D | E | Caffeine (coffee, tea, cola)   |
| 5. | A | B | C | D | E | Cannabis (marijuana, hashish)  |
| 6. | A | B | C | D | E | Cocaine ("coke," snow)   |
| 7. | A | B | C | D | E | Hallucinogens, psychedelics (LSD, THC, "T," MDA, PCP, mescaline, psilocybin, etc.) |
| 8. | A | B | C | D | E | Narcotics (morphine, methadone, heroin, codeine, etc.)                             |
| 9. | A | B | C | D | E | Nicotine (cigarettes)  |



Comfortable Interpersonal Distance Scale

Instructions:

Imagine that the next page represents an unfamiliar round room, and picture yourself in the very center of that room (the circle where the lines all meet).

Now, imagine that a person you might want very, very far from you enters the room at point (1) and walks toward you along the line. Put a mark across the line where the closeness to that person would begin to make you feel uncomfortable.

Imagine a person you might want very, very close to you enters at point (2) and begins to walk toward you. Put a mark across that line where the closeness to that person would begin to make you feel uncomfortable.

Imagine your father (or other male guardian) enters at point (3) and do the same for that person.

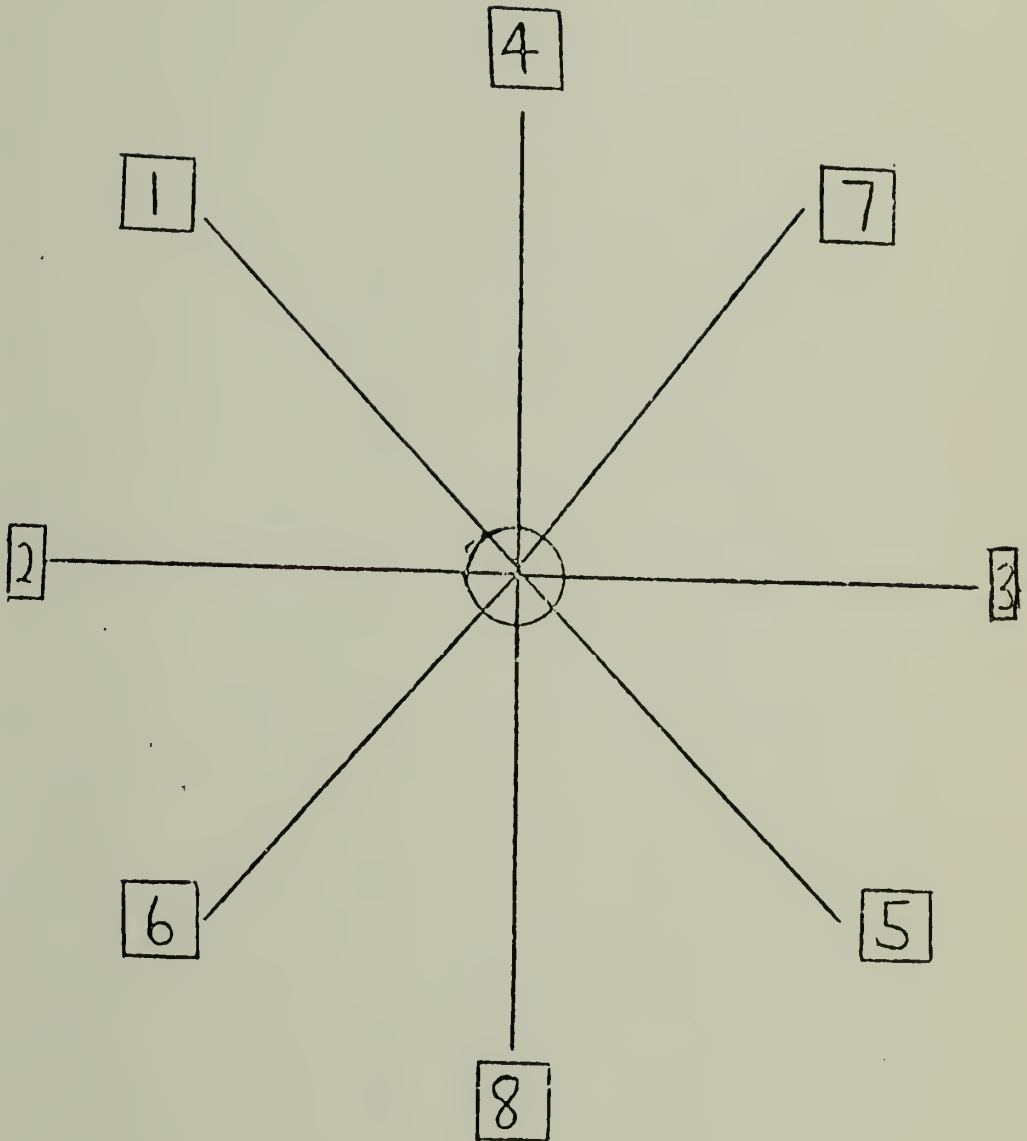
Imagine your mother (or other female guardian) enters at point (4) and do the same for that person.

Imagine a male friend enters at point (5) and do the same for that person.

Imagine a female friend enters at point (6) and do the same for that person.

Imagine a male stranger enters at point (7) and do the same for that person.

Imagine a female stranger enters at point (8) and do the same for that person.



--- Duke and Nowicki, 1972

Parental Attitudes Questionnaire

The questions ask for information about your parents' attitudes and actions. "Parent" includes stepparent, foster parent, or any other adult guardian who has been responsible for you all or most of your life.

If a question asks about "parents" and you were brought up by only one, answer for him or her.

Answer each item by picking the letter on the scale below which best describes how characteristic or uncharacteristic it is as it applies to your experience in your family. Circle the appropriate letter following each item number.

I.

A	B	C	D	E
Very characteristic				Very uncharacteristic

1. A B C D E Members of my family are very close and get along amazingly well.
2. A B C D E When I was little, my parents considered it their business to know what I was up to all the time.
3. A B C D E At home I had a quite definite daily schedule I was expected to follow.
4. A B C D E If I go on after I finish my education and have a very successful career, my parents will be very pleased.
5. A B C D E Relative to friends my age, there were fewer family rules and regulations I was expected to follow.
6. A B C D E If I have any children, I expect to bring them up very similarly to how I was brought up.
7. A B C D E Our family has always done a lot of things together.
8. A B C D E My parents encouraged me to stick up for my rights and to fight back if anybody tried to push me around.

II. All the questions on this section refer to your mother or other female guardian. If you grew up without a mother or female guardian, leave this section blank and go on to Section III.

A	B	C	D	E
Very characteristic				Very uncharacteristic

9. A B C D E My mother believed there was no reason why she should have her own way all the time any more than I should have mine.
10. A B C D E My mother encouraged me to talk to her about my troubles.

Go to next page

11. A B C D E There were rules in my family, but lots of times my mother didn't really care if I lived up to them.
12. A B C D E I was discouraged from ever questioning my mother's way of thinking or doing things.
13. A B C D E My mother didn't mind if I played with toys that were supposed to be for the opposite sex.
14. A B C D E When I did something I shouldn't my mother tried to get me to understand why I was wrong rather than simply punishing me.
15. A B C D E My mother encouraged me to do the best on everything I did.
16. A B C D E My mother didn't want me to bother her with unimportant little details.
17. A B C D E I received a good deal of physical affection from my mother.
18. A B C D E I would describe my mother as a strict parent.
19. A B C D E When I look back, I think my mother criticized me or punished me a lot more than I deserved.
20. A B C D E I was expected to do what my mother told me to with little discussion or explanation.
21. A B C D E My mother always has set up high standards for me to meet.
22. A B C D E I was encouraged to tell my mother if I believed a family rule was unfair.
23. A B C D E I feel that my mother has almost always approved of me and the things I do.
24. A B C D E My mother is very sympathetic to "women's lib".
25. A B C D E My mother frequently praised me for doing well.
26. A B C D E My mother tried to impress upon me that getting along with people was one of the most important things I could learn.
27. A B C D E My mother and I argued a lot about what I should be doing or how I should behave.
28. A B C D E My mother always took an interest in my activities.
29. A B C D E My mother frequently criticized what I was doing.
30. A B C D E My mother was always careful and cautious about what she'd let me do for fear I'd get hurt.
31. A B C D E My mother was so inconsistent in what she expected of me I just gave up trying to understand her.

Go to next page

32. A B C D E My mother believed I had a right to my own point of view and allowed me to express it.

33. A B C D E When I did something I wasn't supposed to and my mother found out about it, she very often let me get away with it.

III. All the questions in this section refer to your father or other male guardian. If you grew up all or most of the time without your father or male guardian, leave this section blank and go to Section IV.

	A	B	C	D	E	
Very						Very
characteristic						uncharacteristic

34. A B C D E My father believed there was no reason why he should have his own way all the time any more than I should have mine.

35. A B C D E My father encouraged me to talk to him about my troubles.

36. A B C D E There were rules in my family but lots of times my father didn't really care if I lived up to them.

37. A B C D E I was discouraged from ever questioning my father's way of thinking or doing things.

38. A B C D E My father didn't mind if I played with toys that were supposed to be for the opposite sex.

39. A B C D E When I did something I shouldn't my father tried to get me to understand why I was wrong rather than simply punishing me.

40. A B C D E My father encouraged me to do my best on everything I did.

41. A B C D E My father didn't want me to bother him with unimportant little problems.

42. A B C D E I received a good deal of physical affection from my father.

43. A B C D E I would describe my father as a strict parent.

44. A B C D E When I look back, I think my father criticized me or punished me a lot more than I deserved.

45. A B C D E I was expected to do what my father told me to with little discussion or explanation.

46. A B C D E My father always has set up high standards for me to meet.

47. A B C D E I was encouraged to tell my father if I believed a family rule was unfair.

48. A B C D E I feel that my father has almost always approved of me and the things I do.

Go to next page

49. A B C D E My father is very sympathetic to "women's lib".
50. A B C D E My father frequently praised me for doing well.
51. A B C D E My father tried to impress upon me that getting along with people was one of the most important things I could learn.
52. A B C D E My father and I argued a lot about what I should be doing or how I should behave.
53. A B C D E My father always took an interest in my activities.
54. A B C D E My father frequently criticized what I was doing.
55. A B C D E My father was always careful and cautious about what he'd let me do for fear I'd get hurt.
56. A B C D E My father was so inconsistent in what he expected of me I just gave up trying to understand him.
57. A B C D E My father believed I had a right to my own point of view and allowed me to express it.
58. A B C D E When I did something I wasn't supposed to and my father found out about it, he very often let me get away with it.

IV. If you did not grow up with both your mother and father (or step- or foster-parents) all or most of the time, leave this section blank. Circle the letter of the statement in each item that best describes your family.

59. When you had a problem, whom did you confide in?
- A My father almost always
  - B My father more often than my mother
  - C My father and my mother equally
  - D My mother more often than my father
  - E My mother almost always
60. My mother and father have always agreed quite closely on how children should be brought up.
- A Very characteristic
  - B Often characteristic
  - C Only sometimes characteristic
  - D Often uncharacteristic
  - E Very uncharacteristic
61. While I was growing up, I felt:
- A Much closer to my father than my mother
  - B Somewhat closer to my father than my mother
  - C Equally close to my mother and my father (or not close to either)
  - D Somewhat closer to my mother than my father
  - E Much closer to my mother than my father

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62. My ideals are:

- A Much more similar to my father's than my mother's
- B Somewhat more similar to my father's than my mother's
- C Equally similar to both my parents' (or not similar to either)
- D Somewhat more similar to my mother's than my father's
- E Much more similar to my mother's than my father's

63. My personality is:

- A Much more similar to my father's than my mother's
- B Somewhat more similar to my father's than my mother's
- C Equally similar to both my parents' (or not similar to either)
- D Somewhat more similar to my mother's than my father's
- E Much more similar to my mother's than my father's

YES NO

ANSIE - FORM C

- \_\_\_ 1. Do you believe that you can stop yourself from catching a cold?
- \_\_\_ 2. Are some people just born lucky?
- \_\_\_ 3. Are you often blamed for things that just aren't your fault?
- \_\_\_ 4. Do you believe that if somebody studies hard enough he or she can pass any subject?
- \_\_\_ 5. Do you feel that most of the time parents listen to what their children have to say?
- \_\_\_ 6. Most of the time do you find it hard to change a friend's (mind) opinion?
- \_\_\_ 7. Do you think that cheering more than luck helps a team to win?
- \_\_\_ 8. Did you feel that it was nearly impossible to change your parent's mind about anything?
- \_\_\_ 9. Do you feel that when you do something wrong there's very little you can do to make it right?
- \_\_\_ 10. Do you believe that most people are just born good at sports?
- \_\_\_ 11. Are most of the other people your age and sex stronger than you are?
- \_\_\_ 12. Do you feel that you have a lot of choice in deciding whom your friends are?
- \_\_\_ 13. Have you ever had a good luck charm?
- \_\_\_ 14. Have you felt that when people were angry with you it was usually for no reason at all?
- \_\_\_ 15. Do you believe that when bad things are going to happen, they just are going to happen no matter what you try to do to stop them?
- \_\_\_ 16. Do you think that people can get their own way if they just keep trying?
- \_\_\_ 17. Do you feel that when somebody your age wants to be your enemy, there's little you can do to change matters?
- \_\_\_ 18. Do you feel that it's easy to get friends to do what you want them to do?
- \_\_\_ 19. Do you feel that when someone doesn't like you there's little you can do about it?
- \_\_\_ 20. Most of the time, do you feel that you have little to say about what your family decides to do?



11. Gives up very easily                      Never gives up easily  
A...B...C...D...E
12. Not at all self-confident                      Very self-confident  
A...B...C...D...E
13. Feels very inferior                      Feels very superior  
A...B...C...D...E
14. Not at all understanding                      Very understanding  
of others                      of others  
A...B...C...D...E
15. Very cold in relations                      Very warm in relations  
with others                      with others  
A...B...C...D...E
16. Goes to pieces under                      Stands up well under  
pressure                      pressure  
A...B...C...D...E
- 

B. Father's Attributes

The following items refer to your perceptions of your father. If you were brought up most of your life by a stepfather, foster father, or other male guardian, please answer for him instead.

If you had no father or other male guardian, please omit this section.

17. Not at all independent                      Very independent  
A...B...C...D...E
18. Not at all emotional                      Very emotional  
A...B...C...D...E
19. Very passive                      Very active  
A...B...C...D...E
20. Not at all able to devote                      Able to devote self completely  
self completely to others                      to others  
A...B...C...D...E
21. Very rough                      Very gentle  
A...B...C...D...E
22. Not at all helpful                      Very helpful  
to others                      to others  
A...B...C...D...E
23. Not at all competitive                      Very competitive  
A...B...C...D...E
24. Not at all kind                      Very kind  
A...B...C...D...E

- |   |                                       |
|---|---------------------------------------|
| 25. Not at all aware of<br>feelings of others | Very aware of<br>feelings of others   |
| A...B...C...D...E                             |                                       |
| 26. Can make decisions<br>easily              | Has difficulty<br>making decisions    |
| A...B...C...D...E                             |                                       |
| 27. Gives up very easily                      | Never gives up easily                 |
| A...B...C...D...E                             |                                       |
| 28. Not at all self-confident                 | Very self-confident                   |
| A...B...C...D...E                             |                                       |
| 29. Feels very inferior                       | Feels very superior                   |
| A...B...C...D...E                             |                                       |
| 30. Not at all understanding<br>of others     | Very understanding<br>of others       |
| A...B...C...D...E                             |                                       |
| 31. Very cold in relations<br>with others     | Very warm in relations<br>with others |
| A...B...C...D...E                             |                                       |
| 32. Goes to pieces under<br>pressure          | Stands up well under<br>pressure      |
| A...B...C...D...E                             |                                       |





